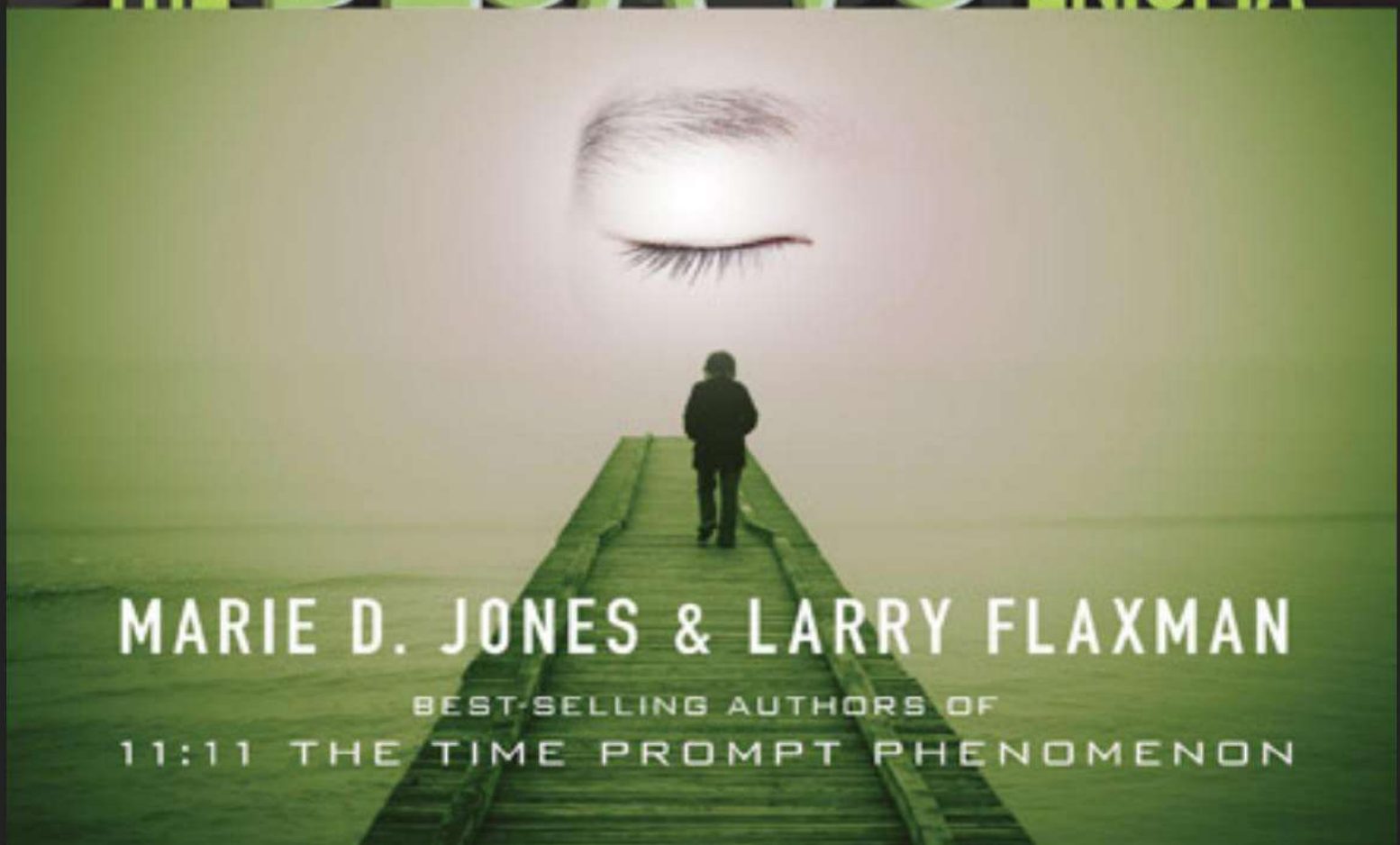
A Journey Through the Anomalies of Mind, Memory, and Time

THE DÉJÀ VU ENIGMA



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BEST-SELLING AUTHORS OF
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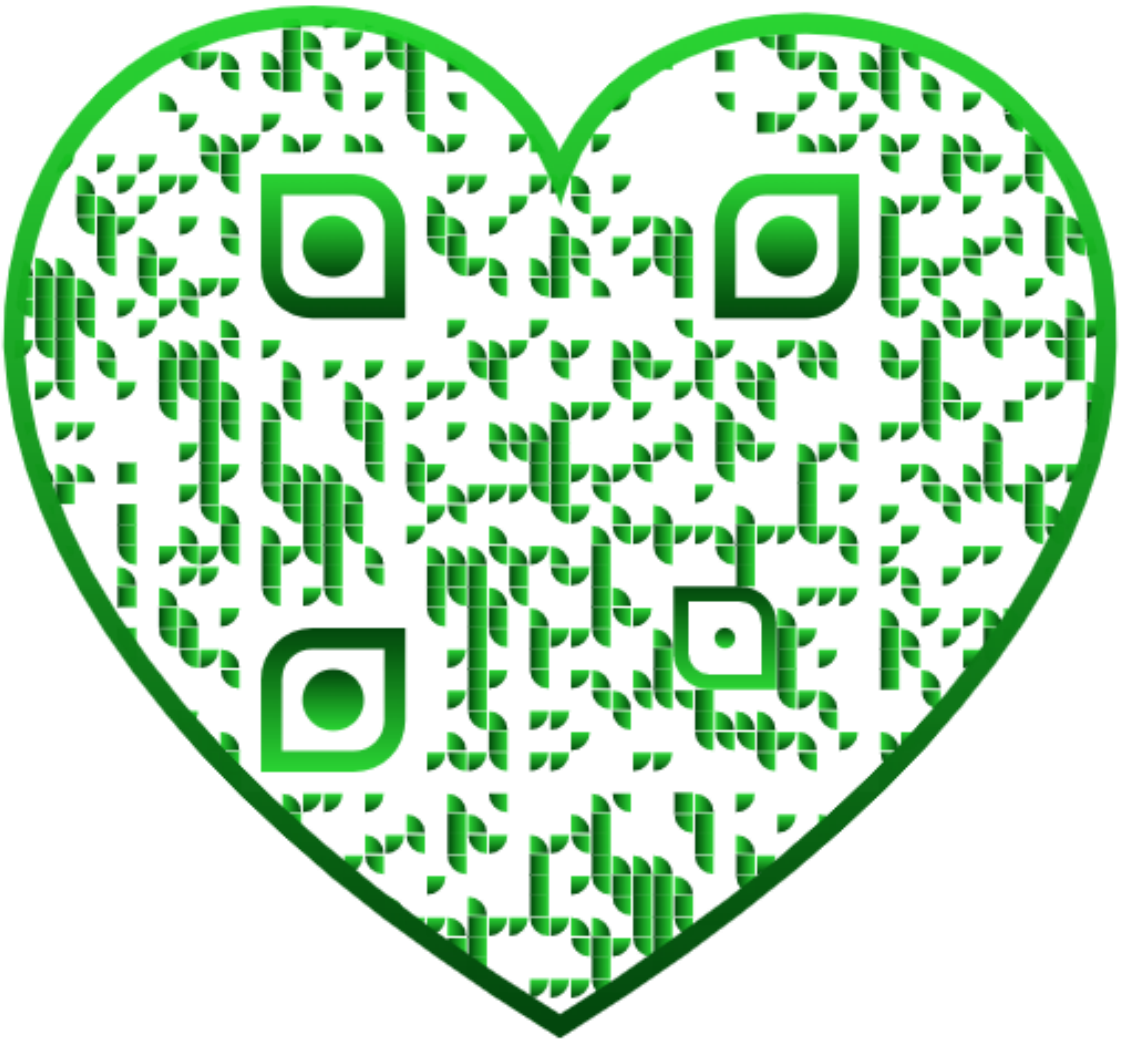

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The Déjà vu Enigma

A Journey Through the Anomalies of Mind, Memory, and Time

Marie D. Jones and Larry Flaxman

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Foreword

DO WE CHEAT THE FERRYMAN?

In The Déjà vu Enigma: A Journey Through the Anomalies of mindMemory In *The Déjà vu Enigma: A Journey Through the Anomalies of Mind, Memory, and Time*, authors Marie D. Jones and Larry Flaxman present an exciting and much-needed review of the latest research and theories attempting to explain one of the most mysterious mind states experienced by human beings: the feeling that this moment has been experienced before at some indeterminate time in the past. This sensation is commonly known as déjà vu, already seen, but this term has now been replaced by the far more accurate déjà vecu—already lived. And curiously enough it was this very sensation that led me to propose a radically new explanation of what is really taking place when we feel that we have lived this moment before, a hypothesis that I call *Cheating the Ferryman*.

I am a migrainer. As long as I can remember I have been struck down by blinding headaches and visual disturbances. However, around 15 years ago things changed. I suddenly stopped having headaches, but the visual disturbances changed in both character and intensity. I began to “see” not just flashing lights and jagged shapes, but also images—images of places I had never been and faces of people I had never met. *Images* is the wrong term. They were more like flashbacks taking place in my periphery vision. But what was strange is that they were “out there” within my field of vision, not like the jagged lines and scotomas that I perceived to be part of my eye, if not within my brain.

These images had motivations of their own. I could not control them in any way. The faces would move from full face into profile. They would open their mouths as if to speak. But as soon as I focused in on them, and paid attention to them, they faded away and were lost. The same fading-out was a

characteristic of the place-images. These were extremely vivid and have become burned within my memory. I can still remember them with absolute clarity. However they too would fade the moment I tried to “look” at them. It was as if I had to pretend that I was not actually aware of them, as if I was sneaking up on them. What was particularly strange was that they would always be positioned in the extreme left-hand side of my field of vision. But what was even stranger was that I knew that these were images of real places and real people.

But at the same time something even stranger started to happen. Not only did my migraines change, but something else manifested itself, something that I later discovered to be called a “migraine aura.”

Usually about 20 minutes or so before an “attack” I would feel very strange, almost dislocated from my environment. Sounds and voices would become distorted as if I was listening to them down a long corridor. My lips would start to tingle, as would the tips of my fingers. This “early warning” was to prove very useful. If I was driving it would allow me to find a convenient spot and stop the car before the visionary disturbances started. Before what would happen would be that the scotoma would hit without warning. The jagged-edged blind-spot would start and then spread, so that I could not see around it, and then within seconds the headache phase would split open my head like a can-opener. This had proven quite dangerous on two occasions when I had been driving on a motorway. Luckily, both times I was near a junction where I could get off.

But there was something else. Before even the aura sensation took place I would have a really strong déjà vu sensation that would last a second or two. This was a very odd feeling of recognition of both my location and the events happening around me, as if I had lived that moment before. Accompanying this was a really peculiar, shiver-like sensation that flashed up my back and exploded like a firework at the bottom of my skull.

Both the images and the déjà sensations continued to strike me about twice a year (and still do), but it was one particular “attack” that started me on the road to *Cheating the Ferryman*.

For some time I had experienced a strong urge to write a book. My normal

work involved me applying my skills as a management consultant within businesses across the UK. However, in March 2000 I found myself in the fortunate position that I could spend some time fulfilling this ambition. However, I had one huge problem: I had no idea what the book would be about. Indeed, at that stage I did not even know if the book would be fiction or non-fiction.

On my first morning of freedom I sat myself down in front of a blank computer screen. The vast expanse of an empty Word document stared back at me from the flickering screen. With my hands poised I waited for inspiration to strike. And strike it did. At that very second I felt a tell-tale tingling in my lips. It was the early-warning of an impending migraine attack. Now, it may seem strange, but I actually enjoy the sensation. I play games with my vision. I will place my hand just outside my central field of vision and watch, fascinated as the hand simply disappears into the blind-spot brought about by the scotoma. I recall doing exactly this when the déjà sensation hit. And this was a really powerful one.

At some time in my past I had sat looking at an identical screen in an identical room. Even now I can recall the familiarity as the sun broke through the clouds and a shaft of light beamed down to earth. I HAD DONE THIS BEFORE. But the feeling was even stranger because I felt that I had done this not once, but many, many times.

With that realization the sensation faded, leaving as its parting shot the familiar lightening bolt up my spine. I smiled to myself. I had my subject matter. I would write a book about déjà vu.

Exactly one year later, almost to the day, I had a finished manuscript in my hand. A book that had started with a déjà sensation had ended with the final page emerging from my printer on a similar cloudy West Sussex afternoon. I flicked through the hundreds of pages of closely typed words and knew that they contained the most amazing hypothesis about the nature of human consciousness that I had ever encountered, and I had written it!

For 12 months I had been involved in an amazing intellectual adventure. As I described it in the book’s introduction, I had felt like an archeologist excavating a mysterious mound. As I dug in I discovered more and more

clues as to the history and meaning of the mound. It revealed its secrets slowly, but in a particular order. I moved from déjà vu to Near-Death Experience and then onto the mysteries of temporal lobe epilepsy. A side excavation involved me encountering the theology of Gnosticism, the writings of Peter Ouspensky, and the time theories of J.W. Dunne, and then, returning to the main excavation, I went on to explore the complexities of neuro-chemistry, schizophrenia, quantum physics, and the latest findings of a new branch of science called “Consciousness Studies.”

Somewhere along the way a title had dropped into my mind, a title that described in a very specific way exactly what my conclusions suggested, a process by which we call “Cheat the Ferryman.”

So what exactly do I mean by “Cheating the Ferryman” (CTF)? Well you may recall that the ancient Greeks believed that after death the newly dead soul—or “Shade”—would find itself on the banks of a huge river, the Styx. Out of the stygian mist would appear a boat. Rowing this boat would be an elderly gentleman known as Charon, the “Ferryman.” His job was to ferry the Shade across to the other side, the world of the dead, Hades. But he did not do this for free. He had to pay the ferryman a small fee for his services. This was usually a small coin called an obolus, which had been helpfully placed under the tongue of the Shade by those responsible for its burial.

My year-long research suggested that at the point of death we may all “Cheat the Ferryman” by never paying him his fee. We never get into the boat because something very strange happens to human consciousness at the point of death.

The déjà experience is central to this process, but more of that later.

The major clue lies in one of the most recorded statements of individuals who report an encounter with the phenomenon known as “Near-Death Experience” (NDE). Many state exactly the same sensation; they say, “My life flashed before my eyes.” Technically this sensation is known as the “Panoramic Life-Review.” Now, many experiencers state that they experience their whole life, every detail, in the blink of an eye. It is as if their life is on a DVD recording and somebody has pressed the “fast forward” button.

But this is a *Near*-Death Experience, not a *Real*-Death Experience (RDE). CTF suggests that in an RDE, the recording does not flash by, but is experienced in "real" time—a literal minute-by-minute reliving of one's whole life from the moment of birth to the moment of death. This takes place in the last moment of life, but as far as the subjective experience of the dying person is concerned this last moment will feel like a lifetime.

This is supported by another reported factor of the classic NDE: the feeling that time slows down. Again, how many times have you heard NDErs explain while in the NDE state that time suddenly had no meaning to them? Or the times that people involved in car crashes or other potentially life-threatening situations report that time seemed, for them, to slow down so that a few seconds felt like hours?

This is because it seems that time-dilation is part of the death experience. As consciousness approaches death, subjective time becomes elastic. It stretches and stretches until it can encompass a whole lifetime in the blink of an eye.

And within that blink of an eye the dying person falls out of time and finds that they are back at the start of their life, ready to live it again. They are existing in a totally different time to that of the observers watching them die. As their eyes flicker shut for the last time they are already in their mother's arms, a new life containing an old life.

So where does déjà vu come in? Well, imagine a situation whereby a dying person living within this "life-movie" comes across an experience in which their old memories momentarily break through from the subconscious into awareness. There will be a subliminal recognition of the circumstances. They will have a vague sensation that they have lived this moment before in an "undefined past," as Dr. Vernon Neppe's definition describes a déjà experience.

According to CTF this is what a déjà vecu ("already lived") is. Exactly what it feels like it is. There is no need for any elaborate neurological or psychological explanation. We have déjà experiences because we have, indeed, lived this moment before.

But what is amazing is that we may have lived this life not just once, but

many times. This is because at the end of the Panoramic Life Review a Near-Death Experience will be encountered again and, in an even smaller time duration, another life review begins.

And this is how the Ferryman is cheated. He is never paid his obolus because no dying person ever gets to cross the Styx. They remain on the riverbank spinning round and round in a mind-created "Eternal Recurrence" similar to Phil Conners in the movie *Groundhog Day*, only in this scenario it is not a *day*, but a *life*.

Of course CTF is simply a hypothesis, nothing more. But it never ceases to amaze me that that déjà experience in front of my PC many years ago led to a possible explanation for itself, and many other inexplicable things such as precognition, synchronicity, and hunches.

This book, *The Déjà vu Enigma*, will take you on a wonderful journey, a journey that will present you with some fascinating theories and ideas as to what déjà vu may be, as well as delve into NDEs and other mysterious anomalies of the mind, memory, and time. But maybe déjà vu is exactly what it says on the box: evidence that we déjà experiencers are living a *Groundhog Day* and in doing so we really are *Cheating the Ferryman*.

—Anthony Peake, author of Is There Life After Death? and The Daemon:

A Guide to Your Extraordinary Secret Self. Learn more about Anthony Peake's work at www.anthonypeake.com.

Introduction

HAVE YOU READ THIS BEFORE?

It seems like years since Tom and Judy had last taken a vacation. Ever since purchasing a local business 15 years ago, their entire lives seemed to revolve around work. As small business owners trying to compete in today's economy, "downtime" has never been an option. Work, work, work. Still, they had promised each other that one day they would take the dream honeymoon that they could not afford when they first got married.

While stacking products on a particularly busy day at work, Tom suddenly felt a sharp twinge of pain in his arm. He blacked out, and, the next thing he knew, he was lying on a gurney in the emergency room with doctors and nurses hovering over him. Tom had experienced a mild heart attack. In addition to the heart attack, the doctor believed he was suffering from chronic fatigue, and ordered him to take a break from all forms of stress. But how could he simply walk away from work for any length of time—especially with the fall promotion beginning in only a matter of weeks? After informing the physician that resting was not an option, the doctor replied, "If you want to live, that is your only option."

That was all the justification that Judy needed to hear. She immediately began planning a getaway. This would be a blessing in disguise—a much-needed break from the stress that likely contributed to his health issues, as well as a chance to spend some quality time together.

Throughout the next few days, she scoured a plethora of travel and tourism Websites looking for vacation ideas. Finally, late one evening she found it: Greece! The perfect place! It was quaint and romantic, and would provide plenty of historic diversions to explore and take their minds off of everything. She booked it online, and announced the destination to Tom the next morning over coffee and scrambled eggs. Perhaps not surprisingly, he seemed

somewhat ambivalent—probably thinking more about the impact on their business rather than an upcoming adventure.

The appointed day quickly arrived, and Tom and Judy set off on their journey. After endless airport transfers, rude travelers, and several time zone changes, they finally arrived at their destination: Athens International Airport. After waiting nearly two hours for their luggage to be unloaded and inspected, they were anxious to immediately jump in and experience Greece. Following a quick stop at their hotel to check in and drop off their luggage, they promptly found themselves on a chartered tourist bus on the way to visit the first historical site: the Acropolis and Parthenon.

As the bus navigated the long, winding, rocky roads at breakneck speed, Tom's mind was back home—thinking about the store. Finally, the bus came to a screeching stop and the guide announced in broken English, "Please be back at the bus in two hours." As the passengers slowly began to depart the bus, Tom and Judy got up and waited their turn to file into the line to exit. In a matter of moments they were standing outside the bus in the hot sun. Judy said, "Tom, look at how magnificent it is!"

But Tom could not answer, for he was frozen in his spot, unable to speak. Tom felt an eerie familiarity—he was absolutely certain that he had been there before! Slowly, he looked around the scattered remains of the landscape. The Propylaea, the Temple of Athena Nike, the Erechtheum, the Theatre of Dionysus—it was all here, just as he had remembered it. But how? Growing up the simple son of a plumber, his parents never had the money to travel. In fact, other than this trip, Tom had never even been outside of his home state! How could he so vividly remember being to a location that was nearly 6,000 miles away? Just as quickly as the eerie feeling of familiarity came over him, it vanished, leaving Tom more confused than ever.

You feel like you've done it before…even as you do it for the very first time.

You see something fresh and new, yet it is so completely, utterly familiar.

You engage in a conversation and realize at that very moment that you have spoken those very same words before...to the very same person.

We've all "been there, done that!" In fact, formal studies confirm that more than 70 percent of people have reported the eerie sensation of what the French refer to as *déjà vu*, or, "already seen." Also called paramnesia or promnesia, déjà vu is the distinct feeling of experiencing a new situation that has already happened in the past. The term *déjà vu* was coined by French philosopher and psychic researcher Émile Boirac (1851-1917). The experience of déjà vu is usually accompanied by a compelling sense of familiarity, and also a sense of "strangeness," or "weirdness." The "previous" experience during a déjà vu episode is most frequently attributed to real life, with many people reporting a firm sense that the experience "genuinely happened" in the past. Rarely does it last for more than a few seconds.

Déjà vu, then, is but a fleeting memory, like a breeze blowing through the conscious mind, of something that holds an incredibly profound sense of recognition to us in the present moment. Yet, how is it possible for someone to have a memory of something happening in the *present moment*, the *NOW*? Déjà vu, which is one of the most widely reported mysteries of the mind, also appears to be universal—cutting across all social, religious, and cultural borders. From children to adults alike, it seems no one is impervious. Surprisingly, the phenomenon is reportedly more common than ghost sightings, UFO sightings, even ESP and psychic abilities!

Throughout the last 30 years, scientific research into déjà vu has revealed some intriguing insights into this present moment recall, with many widespread theories being presented, ranging from short-term memory misfires to neurophysiological disorders to "pre-vision sensory input." Yet theories abound, as well, into the more "paranormal" causes for déjà vu, with new discoveries in quantum physics and consciousness research lending credence to the possibility that these strange and eerie memory misfires might instead be potential glimpses into alternate dimensions, parallel universes, and even the Zero Point Field.

Perhaps déjà vu is much more than just a mind twitch, or trick of the memory banks. Perhaps it is a frustratingly fleeting peek into another level of reality—one we exist in much like our own conscious reality. A parallel

world moving just alongside the one we call “home.” A lifting of the curtain, or parting of the veil. A “thin place” where we come to realize that the world we walk in is but one of many.

Déjà vu, much like synchronicity, reminds us that beneath the surface of reality perhaps another layer exists—one that links us to the borderlands where mind and matter blur and meet. This book will explore the most current and cutting-edge theories into déjà vu, including the latest laboratory research into triggering the brain and the use of hypnosis to create the sensation of “been there, done that.” In addition, this book will feature stories of déjà vu from actual people who have had the experience, and present new ideas and theories into the links between the mystical and the scientific, as well as the connection between déjà vu, memory, and the perception of time.

We intend to take you on a journey far beyond just déjà vu, for the mysteries of the mind are as vast and unknown as the universe itself. From lucid dreams to fugue states, time slips to mind trips, the abnormal brain to the paranormal brain, hallucinations to religious visions, multiple personality disorder to prodigies, intuition to archetype, voodoo curses and the power of suggestion to shared thought and mass hysteria, altered states of perception to demonic possession, the collective unconscious to the symbolic language of the subconscious…we ask you to buckle up and hang on tight as we explore the latest research, and the most amazing theories, involving the anomalies of the inner universe.

Chapter 1

DOING IT AGAIN FOR THE FIRST TIME

It's like déjà vu all over again.
— Yogi Berra, when Mickey Mantle and Roger Maris repeatedly hit back-to-back home runs in the early 1960s

We have all some experience of a feeling, that comes over us occasionally, of what we are saying and doing having been said and done before, in a remote time—of our having been surrounded, dim ages ago, by the same faces, objects, and circumstances—of our knowing perfectly what will be said next, as if we suddenly remember it!
—Charles Dickens, David Copperfield

Déjà vu— Could you be the dream that might come true? Shining through I keep remembering me I keep remembering you Déjà vu
—Dionne Warwick

It comes on without warning—that sudden and eerie feeling of "I've been here before." Yet, you are certain that this is the first time you have ever set foot in this location. Or have you? Perhaps you hear a conversation and then realize that you have heard it before, word for word, nuance for nuance, yet there is no possible way you could have. Maybe you say or do something, and you stop, gasping as the feeling overwhelms you. "I said this before. I did this before." Only you are not remembering an action from the past.

Instead, you are remembering an action from the present.

Déjà vu, French for "already seen," is one of the most widely reported, yet least understood, anomalies of the mind. Is it merely a brain slip, or the clue to something more—perhaps a true paranormal experience? Can the incident be explained as nothing more than a simple "glitch"—the backfiring of a

neural connection as it speeds along, reversing back on itself for just a few seconds, re-recalling something that either just happened, or is happening NOW?

What is it? And why do so many of us have it so often?

Also known as promnesia (remembering something from the future) or paramnesia (distortion of memory), déjà vu has been described as everything from a “brain fart” to a memory “loop-de-loop” to a tantalizing glimpse into a parallel universe situated right smack alongside our own.

“I was saying the same words, to the same person, and wearing the same clothes. I was sitting in the same chair, doing the same thing, but it was as if I was doing it all over again. I knew I had not done any of it before in that very same way, because I had just gotten this new computer. Yet as it happened, and it only lasted a few seconds at most, I completely felt as though I had done it all before… in the exact same setting….”

So goes the average déjà vu experience. The distinct and often unsettling sensation of remembering something that is happening in that very same moment. An experience that would seem to be an utter contradiction in terms, for you cannot remember something *as it is happening*. This would certainly not appear to be short-term memory, but instantaneous memory.

“I could swear this happened before, in just the same way,” we hear people say as they scratch their heads in wonder and amazement. “I did this before.” “I said this before.” “I saw this before.” Yet those who have experienced this baffling phenomenon know without a doubt that they indeed did not do, say, or see it before.

A Brief History

Although we certainly believe that people have been experiencing it since the dawn of humanity, the formal history of déjà vu actually began hundreds of years ago, with mention of similar sensations in the writings of St. Augustine, who referred to them as “falsae memoriae.” Sir Walter Scott

wrote of a sense of “pre-existence,” and similar themes occur throughout the literary works of Proust, Tolstoy, Dickens, and others.

The term *déjà vu*, which has no English equivalent, was termed by Emile Boirac (1851-1917). Boirac, a French philosopher, was fascinated with psychic phenomena, and in 1876 first applied the term to an event that occurred in the past. In a letter to the editor of *Review Philosophique* (some accredit the term to his book *L’Avenir des Sciences Psychiques*), Boirac called it “le sensation du déjà vu.” Later, in 1902, he served as president of the Dijon Academy, where he was deeply involved with research into emanations, psychokinesis, and animal magnetism, echoing his interest in spiritualism. Boirac is also credited with defining the term *metagnomy* (“knowledge acquired without the senses”), which we now refer to as ESP.

Perhaps déjà vu is a reaction to a familiar sensation or memory from an earlier experience, one that was not fully detailed, yet filled with enough elements to trigger the feeling of having been there before. Triggers could be images, smells, or even sounds that make one feel a sudden sense of recognition during a new event or experience—a simple explanation for some déjà vu experiences, but one not quite convincing for those who have had very detailed, extended sensations involving actual conversations, specific locations, and certain people present. Some people have such profoundly detailed déjà vu, they mumble along to the words of a conversation they recall having before, *but know for certain they are having for the first time.*

In 1896, F.L. Arnaud introduced the concept of déjà vu into the scientific community. Arnaud formally proposed that the phenomenon be referred to using the common name of déjà vu (up until then, it has been called paramnesia, memory phantasms, and promnesia). Arnaud’s work included the categorization of the first “symptoms” of a typical déjà vu experience, gleaned from his studies of a 34-year-old patient recovering from cerebral malaria.

Frederick William Henry Myers (1843-1901), founder of the Society for Psychical Research, called déjà vu “promnesia,” which referred to the Greek *pro* meaning “prior to,” and *mnesis,* meaning “memory.” In 1889, psychologist William H. Burnham suggested that déjà vu occurs when the human body is over-rested, stating that when brain centers are “over-rested,

the apperception of a strange scene may be so easy that the aspect of the scene may be familiar." This discounted earlier beliefs that extreme fatigue caused déjà vu!

In 1896, Arthur Allin, a psychology professor at the University of Colorado at Boulder, furthered the study of the phenomenon by proposing several theories regarding the possible explanation of déjà vu. One such theory was the idea that the sensation either arose from elements of forgotten dreams or an interruption of attention when someone experienced a new image. And of course, once Sigmund Freud came into the picture, Freudian scholars simply considered déjà vu to be nothing more than a defense mechanism used to protect the ego from the id and superego.

Carl Jung, in his *Memories, Dreams, Reflections*, described déjà vu as "recognition of immemorially unknown" and believed the phenomenon was related to his concept of the collective unconscious. Since then, some writers have misconstrued Jung's idea of the collective unconscious as being some sort of shared memory bank of humanity, and that when experiencing déjà vu one was in fact accessing this repository. It has also been held that Jung's collective unconscious also served as an origin point for sensations of having lived a past life. Certainly, accessing such a field of memory could provide for a variety of psychological, anomalous, and even "paranormal" anomalies involving mind, memory, and time.

DÉJÀ VU EXPERIENCES BY JOHN MIMMS

A ll of my life I have experienced instances of what is known as déjà vu. I would estimate that I have a frequency of these experiences averaging one per month. The most recent experience I had occurred just about four days ago. We had a business meeting in the office where I work. A person came into the office from another site location in Charlotte, North Carolina. I have never met, had a phone conversation, or even seen a picture of this

individual. During the course of the meeting I had an exchange with this person and another manager about a new operation metrics system we were implementing. This system was completely new and unfamiliar to me as was this individual. Yet the experience, while brief, seemed completely familiar.

When I tried to recall why this was familiar it almost seemed as if I briefly remembered a forgotten dream, but after a few seconds this memory and feeling of familiarity had vanished. Did I have a precognitive dream? Was it just a trick of my mind? Or was there just something about this individual that triggered some sort of identifiable response from my brain? I am not sure I know any more than I know the reasons for the dozens of other experiences of déjà vu in my life.

Most episodes of déjà vu I have experienced fade quickly and are forgotten. I guess for lack of a better explanation my brain gets frustrated from the inability to make sense of and compartmentalize the event and places it into my mental recycle bin. I do have one other experience that I can recall. I am not sure why the memory of this déjà vu moment has stayed with me for so long; perhaps it was the uniqueness of the circumstances. This event happened about 31 years ago when I was just 11 years old. My family had taken a trip to Washington, D.C., and Williamsburg, VA. On the return trip we made a brief stop by Monticello, which was the home of Thomas Jefferson, for an afternoon tour. We had taken the tour of the house and garden and were left to do our own thing for a few minutes by the guide. I wandered to the far side of the garden where there were a couple of out buildings that were used for storage and greenhouses during the colonial period. When I walked in the door of the first building I immediately recognized everything inside. Everything from the walls, floors, and windows to the antique tools hanging on the wall were instantly familiar. I looked around for several minutes and “knew” that I had been there before. But how was this possible? I had never been to Monticello before and at that age the only pictures I had seen were of the front of the house. This was by far

the longest duration I had experienced déjà vu and perhaps that coupled with the unique set of circumstances has caused the memory of this event to stay with me all these years. What caused this déjà vu experience? After 31 years I still don't have an answer.

John Mimms is the Technical Director for ARPAST, the Arkansas Paranormal and Anomalous Studies Team.

The authors of this book posed the simple question, "What is déjà vu?" to the Yahoo Answers Website, and the responses ran from a glitch in the brain to God. Some of the more interesting answers followed:

1. Memories of the past becoming memories of the present inside the brain.
2. Deja vu, stands for "already seen," in French. What happens is that just before you realize you see, your brain already processed the images, thus making a memory for it. The human mind is made like that you automatically bring up memories after being exposed to a certain trigger. So basically, deja vu is preprocessing of the images caught with the eye. However, there are other types of deja vu's. In the other one, you can fully predict what someone will say and what will happen in a certain period of time, and you are fully realizing that. In that case, your brain either truly had experienced it before, which has small odds, since the change you experience something twice is quite small. Or your brain processes ALL incoming information at once, creating a scenario of available actions and what the most likely actions are.
3. I don't think it is a misfire. I think it is something the brain is supposed to be doing. Everything that goes on around you—cars going by, people walking, wind blowing, the way something is settled on the ground—is taken in by your subconscious. I feel that these things are calculated by your subconscious to aid you in better judgment that prolongs survival. When what you have calculated actually happens a few moments later, you get the feeling of deja vu. I think it's possible the mild euphoria and positive recognition you feel

is your brain producing chemicals to indicate you have prolonged your survival. When you are doing something good for your body, it feels good. Same goes for mental stimulus (in most cases, not including compulsion and mental defect).

4. I think that when we experience something, our brains break that experience down into various components, like what something looked like, what the weather was, what it felt like, and so on. Different parts of the brain receive these different dimensions of the experience since the brain has different areas that deal with things like color, movement, and other sensory modes. When we remember the experience, all of these different components are gathered together and presented to the consciousness as an integrated memory. Call this process of sensory recall and integration "The Presenter." When we have deja vu, we feel an uncanny sense that what we are experiencing we are experiencing for the second time exactly the way it happened the first time, and that we are always on the verge of knowing what will happen next because we've "been here before." This state can last quite a long time for some people. My own idea is that there is some neuronal activity in the brain, either from a direct stimulus or from internal misfiring that evokes what I called "The Presenter" all by itself with no palette of sensory experiences for it to integrate and show to the conscious. So we feel that we are experiencing a memory because "The Presenter" is active, but it's running on empty. So the sense of memory recall that "The Presenter" creates is applied to the immediate experience and you think "This has all happened before—I seem to be remembering it."

Modern Thought

The most common modern theories into the origins of déjà vu involve the brain and memory. The latter part of the 20th century has led to some serious scientific study of the phenomenon as an anomaly of memory recall. To validate this explanation, researchers point to the fact that the "sense" of

recollection of a déjà vu is actually stronger than the actual details of the recalled event itself! It is this “sensing” that the focus is placed upon. Studies claim that some people actually will go on to have déjà vu of past déjà vus! Remembering a memory? How could this be possible?

Although this sounds incredible, the emphasis here is on a glitch in short-term memory processing. Certainly, the possibility of this being a software “bug” in our brain’s programming is a possibility—and one that might explain the almost precognitive feel of the experience. Perhaps there is an overlap between the neurological systems responsible for short-term memory and those controlling long-term memory.

Some scientists have suggested that déjà vu is simply one eye perceiving an event a fraction of a second before the other eye does, with the theory being that that one eye might record the stimuli fractionally faster, creating the sense of “recollection” once the other eye kicks in and cognitively makes the same perception. Although this seems like a rational, scientific explanation for the phenomenon, unfortunately it does not explain the research that has been conducted of people with only one functional eye who still report déjà vu. Again, this fact would point to the brain’s overall causal involvement with the strange phenomenon.

Unfortunately, when an anomaly is presented to science, the result is often to immediately categorize and label it as a functional disorder. Regrettably, déjà vu is not immune from this moniker. Some researchers have associated déjà vu with everything from anxiety to multiple personality disorder to epilepsy. Of all of the possible pathologies, temporal lobe epilepsy, which is the result of improper electrical discharges in the brain, seems to be most commonly associated with déjà vu.

In 1955, American-born Canadian neurosurgeon Wilder Penfield conducted his now-famous experiments stimulating the temporal lobes of the study participants with electrical charges. Interestingly, Penfield, a pioneer in research into the human mind, found that approximately 8 percent of the participants experienced déjà vu type “memories” as a result of his electrical probing. Could déjà vu be just such a neurological anomaly that it only occurs in a select few? Possibly a glitch that is triggered by an aberration of the proper functioning of the brain or a zap of electricity to the temporal

lobe? Or perhaps it is the brain mistaking a past memory for a present experience, thanks again to the misfiring of neurons, or missed neurological connections.

Cryptamnesia

Cryptamnesia, the unconscious recollection of material that sometimes spontaneously rises to consciousness as memory, might also explain déjà vu. Perhaps it is true that learned information is never really forgotten, but instead stored away deep in the brain, and when a similar occurrence invokes a need for the knowledge learned in the past, suddenly, we remember it NOW, leading to the feeling of that all familiar feeling. In a 1941 study, hypnosis was utilized in an attempt to try to create post-hypnotic amnesia in participants using previously viewed materials. Perhaps not surprisingly, three of the 10 participants reported having the sensation of déjà vu when once again presented with the material.

Dissociative Identity Disorder

Multiple personality disorder, now more formally known as Dissociative Identity Disorder (DID), hints at the spooky possibility that we all have fractured minds. In this disorder, it is believed that when one experiences the same thing as another, within the same time frame, we experience classic déjà vu. Same body, different mind, so to speak. This might explain why we always sense our presence in both worlds, yet know we are only operating fully in one (or are we?). Schizophrenia, one of the most interesting brain disorders, may also be linked to déjà vu, as a disease of a split mind that could account for the dual recognition of a single event.

Perhaps the mind has a mind of its own.

Temporal lobe epilepsy (TLE) is most often linked with déjà vu as a potential cause, because déjà vu sometimes accompanies experiences of TLE in patients, usually right before an attack or during the seizure between convulsions. However, the sheer prevalence of déjà vu experiences in society

discredits this connection as being the sole source for them. Nevertheless, way too many people who do not have TLE do experience déjà vu episodes.

Skeptics

Skeptics will argue that we are simply remembering a similar event, or even the actual event itself, but one that indeed really occurred many moons ago. Are we simply recalling an event from childhood, or a forgotten situation to which we barely paid the first time around? The very definition of the word *skeptic* is someone who "instinctively or habitually doubts, questions, or disagrees with assertions or generally accepted conclusions" really says it all. One has to wonder, though, what the skeptics would say if they ever had had an intense experience of déjà vu, one that shakes the very foundation of what they believe reality to be. What would their reaction be to an experience that forces them to consider if there is truly some deeper, more implicate meaning to their existence?

Not everyone agrees that déjà vu is an anomaly of the memory, or even some kind of simple brain slip-up. Some suggest that déjà vu is a proverbial doorway or, rather, a peek inside the keyhole of a door that leads to other (perhaps more interesting!) worlds. Or maybe a fleeting vision of a past life or even a parallel life in another dimension, another universe. Think of the incredible possibilities! Are we indeed living double lives? And is déjà vu the connective link between those lives?

Before we get into both the cutting-edge scientific research as well as the more paranormally eerie explanations for déjà vu, it must be mentioned that there is the opposite of déjà vu, known as "jamais vu," or "never seen." During an episode of jamais vu one experiences the unusual sensation of not recognizing a familiar situation. In this case, someone sees something they have seen dozens, maybe even hundreds of times before, yet they fail to recognize it for a short time. It could be a word, a person, a place, or a skill. Jamais vu could be the reason behind the popularity of games such as Trivial Pursuit, which requires quick recall of trivia we all should but often don't

remember (most likely because it IS trivia and thus not important or meaningful enough to be stored in our long-term memory bank). It may also explain the temporary sensation of not knowing someone that is very familiar, thinking him or her a stranger.

Jamais vu is the feeling that you get when you look at a word or phrase and it feels off, unfamiliar, or clumsy, something we writers often experience. Also known as word alienation, jamais vu also occurs when you are unable to recall how to spell a familiar and oft-used word. In a sense, jamais vu can be thought of as the depersonalization of something. We question its reality. This experience often leads us to actually doubt that the word we once knew is the right word at all to describe what we are seeing. We are at a complete loss within that brief span of time until our memory is fully restored and we realize that we are looking at a word we truly recognize and understand. But for just that little while, it was the most elusive word in the world.

Ever have the feeling you are on the verge of a brilliant mental breakthrough, or that you are about to stumble upon the ultimate truth of a thing, but it doesn't happen? You are experiencing "presque vu" or "almost seen."

Different Kinds of Familiar

Psychologist Arthur Funkhouser didn't like the fact that the term *déjà vu* was too broad and vague, a seeming "catch-all label" for a number of similar experiences involving the present experience of a memory so familiar. He suggested three more explanatory categories of déjà vu be utilized instead:

1. **DÉJÀ VÉCU**: "Already experienced or already lived through." Probably the most prevalent form of déjà vu. In the midst of a déjà vécu experience, the details are surprisingly clear and accurate, and the experiencer is conscious that the sequence of events in the present scenario conforms identically to their memory of it.
2. **DÉJÀ SENTI**: "Already felt." Triggered by a thought or perhaps a voice, this has to do with recognizing a feeling that inexplicably feels

familiar. Déjá senti is often forgotten quickly.

3. **DÉJÀ VISITÉ**: "Already visited." Associated with a specific location, object, or building that seems familiar, despite being experienced for the first time. Here time plays no role.

Add to these, courtesy of other scientists/psychologists, déjà entendu, "already heard"; déjà lu, "already read"; déjà connu, "already known personally"; déjà gouté, "already tasted"; déjà rêve, "already dreamed"; and déjà dit, "already said."

Art Funkhouser is associated with the Deja Experience Research Website (*www.deja-experience-research.org*), an ambitious project that seeks to provide an on-line resource for people interested in exploring the many forms of "déjà experience." The site contains survey data analysis (from an online survey at *http:// silenroc.com/dejavu*), personal experiences by viewers, related abstracts, links, and a ton of information about déjà everything. On his Website Funkhouser offers his own categorizations of déjà experiences that he states are in order of prevalence:

1. **NORMAL**—short, medium, or long duration (may even be continuous). Consist mainly of an "inexplicable sense of familiarity," but involve no paranormal (precognitive, telepathic, and so on) elements. Not associated with pathological conditions. These experiences may serve some psychological need.
2. **PARANORMAL**—experiences that include some precognitive knowledge, where the experiencer remembers ahead of time what will be said or done, or telepathic knowledge, where the experiencer may suddenly know what the other person is thinking. Not associated with a pathological condition.
3. **PATHOLOGICAL**—causes suffering. Epilepsy of the temporal lobe is often the pathological condition that is connected with pathological déjà vu experience. Other "ailments" that can produce déjà vu might be alcoholic psychosis, migraines, schizophrenia, and psychoneurosis. The frequency and intensity of these experiences along with the accompanying distress due to headache and/or nausea cause distress to the experiencer.
4. **EVOKED**—reproducing or invoking déjà vu experiences with such things as electrical stimulation to parts of brain, the use of drugs that

trigger déjà vu, or even hypnosis.

The Deja Experience Research site, and the work of Dr. Funkhouser, suggests many phenomena related to déjà vu that could help shed light on the explanation as well as the origin of déjà vu experiences. Some of these phenomena include:

- **CAPGRAS SYNDROME**—The afflicted person believes that familiar people have all been replaced by impostors.
- **FREGOLI DELUSION**—Afflicted person believes many or all people he or she meets are really ONE person in disguises.
- **TYPES OF PARAMNESIA**—Can confuse dreams with reality, and can give a feeling that everything is familiar, or repeated.
- **REDINTEGRATION**—Seeing, hearing, touching, tasting, or smelling something evokes an entire memory sequence.
- **PRECOGNITIVE DREAMS**—Dreams that foretell a future event; events are remembered or written down before they occur.
- **PREMONITION**—Forewarning of something to come.
- **INTUITIVE HUNCH**—Something sensed that is not based on factual evidence.
- **MISTAKEN IDENTITY**—Believing you know someone, but ends up you do not.
- **REINCARNATION**—Having lived past life/lives.
- **OUT-OF-BODY EXPERIENCES (OBES)**—Leaving and moving outside your own physical body.
- **TELEPATHY**—Reading the minds of others.
- **CLAIRVOYANCE**—Mentally seeing an event taking place far away.
- **SYNCHRONICITY**—Meaningful coincidences that seem to have no apparent cause.

Explanations

Actual explanations for déjà vu being examined by the Deja Experience Research site run the gamut from the outside influence of an exterior force to

malfunctions of the brain, psychological difficulties such as extreme fatigue or high anxiety states, the idea of reliving a snippet of one's past life, the sudden reminiscence of a precognitive dream that may feel like a déjà vu, and even a synchronicity that occurs. On the Website, Funkhouser states that within the category of outside influences as the cause of déjà vu: "The idea is basically simple: one has somehow had an experience that is similar to the present one and the feeling of recognition spreads to include the entire encounter. The source of the first experience could be within the outer world, that is, in daily life; or it could come from within, in the form of dream or fantasy. There is thus an element of coincidence involved."

There is, he states, such a mechanism often at work in déjà vu experiences, citing that people often have the impression of familiarity toward a person, place, smell, or tune, only to later find out that it isn't possible. On some level, a mistake has been made. Something has been mistaken for something else, and as Funkhouser writes a "good bit of detective work" can discover the reason for the mistaken impression. Often this mistaken impression comes from the unconscious, and may be a "projection mechanism" in which some aspect of the inner world has been seen in the outer world.

Many Worlds Theory

In terms of past lives, déjà experiences may be accesses to memories that one may have lived through. One might wonder, though, how in many déjà experiences, what is being "recalled in the present moment" often involves elements that can only be associated with the present time the experiencer is in. It would be hard to pass off a déjà vu experience involving someone wearing a specific type of clothing using a specific type of technology as a glimpse into a past life, when those types of clothing and technology may not have yet existed. This suggests a potential connection to the possibility of a parallel universe. Postulated by physicist Hugh Everett, the Many Worlds Theory posits that we may exist as we are in many other universes, but perhaps as we are only for a short time before we make a different choice that breaks off into another universe (and another opportunity for more déjà vu down the road!). The concept of synchrony can come into play here as well,

suggesting that déjà vus are synchronized moments between two parallel universes or alternate realities in which we are saying or doing the exact same thing at the exact same moment, and becoming consciously aware of it, even if it only lasts for a brief span of time.

Initially, Everett actually called the Many Worlds Theory the "'Relative State Formulation of Quantum Mechanics," describing a universal wave function of a series of branching universes that make up the "multiverse." It is in these branching universes, Everett believed, that there are multiple copies of each of us, possibly an infinite number of copies, in which we are alive, dead, and everything in between, doing every possible thing at every possible time. Thus, there are chances that at some point in time, we might be doing the same exact thing in at least two of the universes—or maybe even 2,000 universes. In each of these universes we would happen to be dressed the same, with the same person (or at least a copy of them!), and having the same food for dinner. Conceivably, déjà vu may be a slip of consciousness where we connect with "us" on another level of reality. It certainly doesn't happen all the time, because if it did, we'd go insane. Déjà vu, then, may be elusive for a reason.

Classifications and Types

Psychiatrist Vernon Neppe, credited with positing the accepted scientific definition of déjà vu as a "subjectively inappropriate impression of familiarity of the present experience with an undefined past," takes categorizations of déjà experiences one step further, designating déjà vu into 21 different types that fall under seven unique classifications. His research can be found on the Website for the Pacific Neuropsychiatric Institute (*www.pni.org*).

1. Disorder of memory.
2. Disorder of ego state.
3. Ego defense.
4. Temporal perceptual disturbance.
5. Recognition disorder.

6. Manifestation of epileptic firing.
7. Subjective paranormal experience.

Neppe also includes a number of other types of déjà vu experiences, such as déjà voulu, “already wanted”; déjà trouvé, “already met”; déjà raconté, “already recounted”; déjà eprouvé, “already attempted”; and déjà visité, “already visited”; among others.

And as for our friend Freud? Well, he predictably associated déjà vu with the genitals of one’s mother, suggesting that “there is indeed no other place about which one can assert with such conviction that one has been there before.”

Although traditional modern science may have appeared to pay little attention to déjà vu, with only a handful (if that many!) devoted to trying to define the enigma and understand the mechanisms behind it, there have been many scientists and psychologists throughout the last decade promulgating cutting-edge research into the phenomenon, and challenging the persistent theories of the past.

Chris Moulin is a cognitive neuropsychologist currently researching both déjà vu and déjà vécu in his lab at Leeds University, England. He and his colleagues have published scientific papers and conduct ongoing studies into a subject matter few scientists dare tackle. In fact, Moulin is only one of a handful of scientists who have devoted quality time to pursuing knowledge of this elusive experience.

In 2000, Moulin, a postdoctoral student in the field of neuroscience, was at the University of Bristol in England when he first began working with a patient experiencing frustrating repeated episodes of déjà vu. These episodes appeared constant enough to pique the interest of Moulin, who, along with his colleagues, described the patient’s experiences in the journal *Neuropsychologia* in 2005. This study led to similar revelations from other patients suffering from relived memories akin to déjà vu. Moulin began seeing more and more patients with similar conditions at the University clinic, and through his research was able to determine that a direct correlation existed between déjà vu-type experiences and age.

In fact, this relationship with age is important, as some researchers suggest

that déjà vu is not experienced before the age of 8 or 9. This strongly implies that the brain must be developed to a certain point in order for the required processes to take place. Alan Brown, a psychologist at Southern Methodist University, wrote of these findings in his comprehensive book *The Déjà vu Experience*. Brown posited that approximately two thirds of the population experience déjà vu, also stating it is more likely to occur when people are stressed out or exhausted. Brown's book suggests more than 30 possible explanations for the phenomenon, running the gamut from double perception to dual processing of memories to electrical signals in the brain going haywire.

Maybe we are overlooking the obvious. Perhaps the answer is as simple as the brain experiencing a delay in signals, and then perceiving the delay as déjà vu, or not properly processing a present memory from a past one, and then mistaking an object that resembles another for the real thing. Brown also points out how, in the "double perception" theory, the feeling of déjà vu eventually returns to the present scene and the sensation then feels like a normal "memory."

But even Brown admits that the phenomenon could involve several of the theories he puts forth happening at the same time due to the fact that there is not just one easy explanation or readily identifiable mechanism. We are not just talking about a sensation of having recalled something. Déjà vu is all about the sensation of having recalled something *happening right now in the present moment.* It is that simple differentiation that makes it so difficult to truly say what déjà vu is, and is not.

Moulin, with colleague Akira O'Connor, went about the task of attempting to recreate déjà vu in a lab setting. Their motivation was Moulin's research into "chronic déjà vu," in which those suffering are overwhelmed by the ongoing sensation of familiarity they encounter with new experiences, almost to a point of developing a sense of precognition. In the January 2006 issue of *World Science. net,* the two University of Leeds researchers (O'Connor was a PhD student at the time) described the process of trying to unlock the keys to chronic déjà vu, which allowed the sufferers the ability to recall people, places, and things in full detail that never occurred until the present moment. Moulin's focus was on the temporal lobe system, which "fires up" when we

remember the past, as well as a “recollective experience,” or a sense of one’s self in the past.

Hypnosis

Chronic déjà vu then could be overactive circuitry in the brain, perhaps circuitry in the temporal lobe that is permanently switched “on,” constantly creating false memories for the person with no preexisting precedent. O’Connor began research into the induction of déjà vu using hypnosis as part of the ongoing project with Moulin. *ScienceDaily.com* reported on this project, the Cognitive Feelings Framework, in early 2006. CFF, a project unique to the University of Leeds, was conducted by Moulin with professorial fellow Martin Conway, and involved the use of hypnosis to trigger déjà vu in lab volunteers. The idea was to trigger a sense of familiarity toward an object the volunteer had never before seen, and involved showing volunteers two dozen common words, then hypnotizing them. The volunteers, placed in soundproof cubicles, were put under, and then told that when they saw the next word in a red frame, they would experience familiarity with it, even though they did not know when they last saw the word. In contrast, words in a green frame were suggested to belong to the original list to which they were first exposed.

The result was that 10 out of 18 volunteers reported a sensation very similar to déjà vu when they were shown the red framed words. The findings were enough to prompt additional work into stimulation of the temporal lobe to trigger familiarity, and Professor Alan Brown suggested that the use of hypnotic stimulation to either “stimulate or simulate a déjà vu experience could potentially be a very fruitful way to explore the phenomenon.”

DÉJÀ VU IS EVERYWHERE

D éjà vu experiences abound on the Web. People are eager to share their experiences in the hopes of finding some understanding and

commonality. Here are some we found, typos, grammatical mistakes, and all.

I experience déjà vu over and over again. Yes, I have multiple déjà vus all the time, and sometimes people I am with have them at the same time. That suggests to me our minds are linked in some way that science cannot explain. Everytime it happens it makes me feel as though I am out of my body for a moment, connected to a bigger source of knowledge. Does that make sense?

—R.D. December12, 2008

It's funny that you asked for deja vu stories today. This afternoon, I was babysitting two school-aged children of my boss on my day off because they both have the flu and were not able to attend school. I have never sat with these two on a school day before and never when my own children were not here as well. However, today, I got them settled watching a movie, specifically "Prince Caspian" (part II of the Lion the Witch and the Wardrobe). This movie was the girl's spontaneous choice. I had one of those overwhelmingly strong senses of deja vu. I remembered working on my computer, glancing out the window at the rain, the sounds of the same movie in the background and two young girls on the couch watching the movie. As normal with deja vu, the feeling passed within about 10 minutes, but I know I had already done this somehow. I had no conscious pre-cognition of the event, just a surety that I had already been in this exact moment.

—Susan Bradberry, October 2009

I'm another person who has had multiple deja-vu experiences, including two particularly "deep" experiences where I actually said to myself "this woman is about to say this" and she then said exactly what I predicted. So I am one of those who finds the "standard" explanation completely untenable. I suspect we have precognitive experiences from time to time in the dream state, then remember them when the events take place as deja vu...

—M.C., May 4, 2006

There was an occasion during a phone conversation that I stopped to announce I was "having a major déjà vu," only for him to say he was too. The sensation of reliving a moment is startling enough but to share it was altogether another matter.

—A. October 25, 2006

I have always had deja vu to a degree, coming and going....Two years ago, deja vu lasted almost three months, non stop, went to bed with and woke up with it. My doctor is aware of it and suggested a mental health issues. I do not believe it is a mental health issue.... It comes and goes, sometimes a few second, few minutes, few hours, all day.... I am 49 years [old] ….

—R., November 15, 2006

Déjà vu happens all the time to me. I get it at least once a week, and sometimes it lasts for minutes, not just seconds. I can predict exactly what someone is going to say or do, as it happens. It is creepy and very scary at times, to feel like I know what is happening as it happens, when I shouldn't know….

—L. December 19, 2008

Further Studies

Moulin's research into déjà vu and other memory disorders continue at the Moulin Lab Memory Research Center at the University of Leeds Institute of Psychological Sciences. Researchers post blogs and even déjà vu and memory awareness questionnaires that one can take online at their Website, *web.mac.com/chris*. *moulin*, with access to photos and ongoing studies.

Other scientific studies throughout the past few years also suggest the merit of giving déjà vu a second look. Colorado State University psychologist Anne M. Cleary conducted experiments that tested participants' "familiarity-based recognition." Cleary and her team gave the participants a list of celebrity names, and then later showed them a collection of celebrity photographs, some of which were on the original list, some of which were not. Participants were asked to identify the celebrities by their photos and indicate whether they believed the same celebrities were on the original list to which they were exposed.

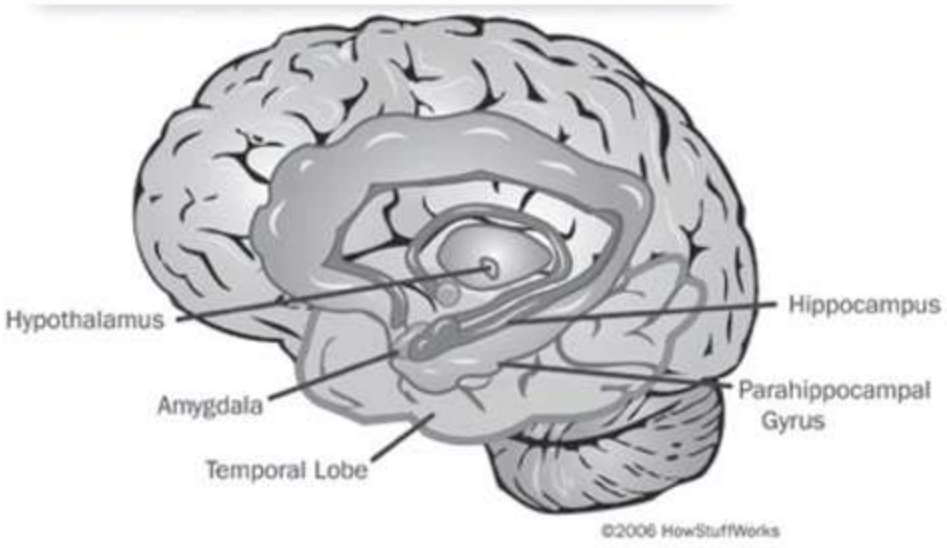
The study results suggested that even when participants were unable to successfully identify a particular celebrity by photograph, they still had a

sense of whether or not the celebrity's name had appeared on the earlier list. The bottom line behind this study suggested that while the participants might not be able to identify the source of their familiarity with a celebrity, they did agree that the celebrity was familiar to them. Cleary's team substituted celebrity photos and names with famous geographic locations with similar results being obtained. The researchers theorized that the participants stored a small amount of information in their memory bank, but not quite enough to mentally connect the memory to the new experience.

In an attempt to determine which elements trigger a sense of familiarity, Cleary also tested subjects using word recognition. Using a random list of words, study participants were exposed to a word recognition test containing words that resembled some of those on the random list in sound (example: *random* sounds familiar to *tandem*). Participants still reported the sense of familiarity when they saw a similar sounding word on the test, even if they could not recall the original word from the random list to which they were first exposed.

From this study, the researchers postulated that humans are able to store fragments of memories of an experience, and when exposed to a new experience that contains some of those fragmentary bits, we experience déjà vu.

FIGURE 1.1 *The parts of the brain involved with short- to long-term memory and the déjà vu experience, according to some psychologists and researchers investigating the phenomenon. Image courtesy of HowStuffWorks.*



DÉJÀ VU TIED TO FAMILIARITY WITH THE PAST?

In a December 2008 report published by Current Directions in *Psychological Science*, researchers from Colorado State University studied the parallels between déjà vu and theories of human recognition memory. Headed by Anne Cleary, the research team's findings suggest that déjà vu occurs when a current situation resembles a situation that has previously occurred in one's life. A sort of "situational overlap" leads to the feeling of familiarity. The parts of the brain involved are the same parts involved in memory retainment and recall.

But though some scientists are quick to pass off déjà vu as just an "interesting occurrence" and nothing with any mystical connotations, not all will admit the answers is that simple.

In a September 2005 *Discover Magazine* article titled "The Psychology of

Déjà vu," psychologist Alan Brown, author of *The Déjà vu Experience*, said that déjà vu is a hot potato for scientists. To Brown, the paranormal theories contaminate the field of scientific study. "Déjà vu is a daunting phenomenon to capture in the laboratory," Brown says. He is also quick to point out that it is imperative to bring déjà vu into a more legitimate framework. "Anytime the brain behaves strangely, there's an opportunity to learn something about how it behaves normally…. If we can get a handle on it, we've got a gold mine."

Brown admits that both the fleeting nature of déjà vu, and the tendency of those who experience it to forget the details soon afterward, make tools such as retrospective surveys wholly unreliable. His research with Duke University psychologist Elizabeth Marsh in the early part of this decade suggested that déjà vu is "more than just a hallucination—a misfiring of neurons—as many psychologists have long believed." They suggest the "double perception" theory, one that has its origins in the late 19th century. Double perception theory proposes that people sometimes see things twice in quick succession. The first time they see it, perhaps it is superficially or peripherally. The second time, they have full awareness. Déjà vu occurs when the perceptions meet and greet, so to speak. The brain may not have registered the object or event at first glance, but it did register it subliminally, thus making that "second glance" seem oddly familiar.

Deep Brain Stimulation

In January 2008, ScienceDaily reported on a research study involving the use of deep brain stimulation (DBS) to treat such diseases as Parkinson's. This study suggests that DBS, a fairly complex medical procedure, might also be used as a potential treatment modality for many other conditions as well. In fact, a team at the Toronto Western Hospital in Toronto, Ontario, led by Professor of Neurosurgery Andres Lozano, discovered a very strange side effect during a study conducted on a morbidly obese patient: déjà vu. The article, titled "Deep Brain Stimulation in Hypothalamus Triggers Déjà vu Memory Recall in Patient," documented the use of hypothalamic DBS on a 50-year-old man with a history of obesity. Nothing had worked to help the

man, so Lozano's team set about to identify sites in the hypothalamus that might effectively suppress appetite when stimulated by implanted electrodes. During stimulation to the hypothalamus of the patient, he experienced sudden déjà vu. His déjà vu experiences increased in intensity as the stimulation increased. The contact points that seemed to trigger the déjà vu experience were found to be in the hypothalamus and near the fornix. This region of the brain is responsible for carrying signals to the limbic system, which, in turn, is involved in both memory and emotion. The stimulation influenced both motor and limbic circuits in the brain, and, according to the article, drove the activity in the temporal lobe and hippocampus, both critical parts of the brain's memory circuit.

Two months later, when the patient had been released from the hospital, the research team was able to "induce and videotape the memory effects seen in the operating room by turning on the electrical stimulation." This occurred in an office setting, and the patient's memory continued to be tested, with and without the stimulation, concluding with a three-week period of continuous hypothalamic stimulation. The patient showed a significant improvement in learning tests and the ability to recall unrelated paired objects when stimulated, suggesting that "just as DBS can influence motor and limbic circuits, it may be possible to apply electrical stimulation to modulate memory function…and gain a better understanding of the neural substrates of memory."

No doubt those neural substrates are connected to déjà vu and memory anomalies, the subject of ongoing studies involving differing areas of the brain. In Chapter 2, we will take a more detailed look at the brain and memory.

Some of the most intriguing research involving déjà vu occurred when déjà vu was not even the topic of study. In 2001 Rick Strassman MD, a psychiatrist at the University of New Mexico School of Medicine, published the results of 11 years worth of federally funded and approved human hallucinogen research. Strassman's research involved the use of DMT,

dimethyltryptamine (the principal psychoactive alkaloid found in ayahuasca), which was injected into human volunteers. The results obtained in Strassman's research were stunning, but what interests us here is a side effect he noted in some of the volunteers: déjà vu. We asked him about his experiences in the lab:

In your experiments with DMT, you state that some of your subjects experienced déjà vu. Can you briefly describe one such experiment?

**Here's an edited excerpt from one volunteer's session:*

It was a very familiar place, like I'd been there before. It's so strange to have in my mind the feeling of "It's just like last time," even though this is the first time I'd taken DMT. You [the two researchers] were sitting on either side of me both "then" and now. I was experiencing certain emotions and feelings that were giving me a powerful conviction of being in two co-realities. It's so familiar. I guess it means I am destined to be in this study. It's weird—as it gets more familiar it seems to be more and more alien. It's so disjointed. It's happening all the time, at this core level; it really is, all the training and conditioning I have is completely something else. There's the rub, you can't really quite get what's real.

I see why people liken it to death. I think people do remember dying. This is just a re-familiarizing yourself with it.

What part of the brain was "triggered" or "activated" by the DMT that resulted in the déjà vu experiences?

We didn't do those kinds of brain scans on people, so I don't know the answer to your question.

Did this happen with any other endogenous hallucinogen?

DMT is the only endogenous hallucinogen that's ever been studied in humans. Other hallucinogens seem to elicit déjà vu, however; for example, LSD, and psilocybin mushrooms.

We have a small amount of DMT in our brains, do we not? Could it be possible that déjà vu is just a glitch in our brain's usual functioning? Describe your own theory, based upon your work, of what déjà vu is.

We all have DMT circulating in our bodies at all times, including in our brains. I wouldn't call déjà vu a glitch necessarily. It begs the question why we have an endogenous hallucinogen, such as DMT, in our makeup. I haven't come up with a particular theory of how déjà vu works, as it wasn't a major focus of my study. But, I'll address the general issue:

Stress raises DMT levels in lower animals, and in psychotic humans levels seem to rise in association with worsening psychosis. However, we do not know much about the normal dynamics of DMT in normal people—that is, whether levels rise with stress. It makes sense to assume that any change in conscious experience is associated with changes in brain chemistry. Sometimes those brain chemistry changes trigger the subjective experiences in question; other times the subjective experience seems to trigger the changes in brain chemistry. I think the same would hold true with respect to endogenous mind-altering substances, be it DMT or something else—that is, such substances may trigger a déjà vu experience, or may be released in association with a déjà vu experience, which is triggered by certain psychological and/or environmental antecedents.

On the other hand, we can get very speculative. Along those lines, one might argue that DMT elicits a particular state of consciousness, which we only remember when we are on DMT. That is the definition of "state-specific memory," which is a well-established psychological phenomenon. For example, during an alcoholic black-out, people say and do things they are absolutely amnestic for when sober. But, they can recall those things during their next black-out. Perhaps certain experiences happened to someone while in a state of consciousness associated with elevated levels of DMT—this might be as "ephemeral" or "subjective" as a dream. Some researchers have theorized that DMT levels rise in association with dreams, and that elevated DMT levels mediate the hallucinatory elements of the dream. When in the sober condition, these memories are blocked; but when DMT levels rise (either in a dream, or a super-stressful circumstance [if, indeed, DMT levels do rise in response to stress in normals]), then one experiences the link between the present and the past experiences.

Might DMT be possibly involved in the perception of other paranormal phenomena, such as ghosts, entities, angelic visions, and visitations? Could this phenomena be "all in the mind"?

I speculate freely about some of these questions in my book, DMT —The Spirit Molecule *(Park Street Press: 2001). As I discuss above, visions can be triggered by endogenous substances. On the other hand, the endogenous substance may be the medium through which spiritual forces or beings enwrap themselves so as to make themselves perceptible.*

A Scientific Explanation

Although science has yet to offer an absolute hands-down explanation for déjà vu, those involved in the study of anomalous phenomena consider déjà vu to be mysterious and elusive enough to suggest links to the world of quantum physics, the paranormal, and even metaphysics. Yet some of these more unusual theories actually might lead to ideas for further scientific research into the brain and human consciousness.

One of the problems with finding a scientific explanation for déjà vu is that déjà vu is a totally subjective experience, one that millions of people experience, or have experienced, but one that has no "outside" effects or evidence. It is all cause with no effects (other then the eerie sensation and haunting feeling that continues often after the déjà vu itself has ended!). When dealing with such a subjective phenomenon, of which there is no external confirmation, we have only people's words that it has happened to base our theories upon. Thus, the difficulty in pin-pointing a cause. Although, the more we come to understand our own brains and human consciousness, the closer we may be getting.

DO YOU DÉJÀ VU?

Psychologist Alan S. Brown is the author of *The Déjà vu Illusion*, a paper published in a 2004 issue of the journal of the *American Psychological Society*. Brown's extensive research into the phenomenon, utilizing more than 50 surveys on déjà vu, offers some intriguing statistics:

- Approximately two thirds of individuals have had at least one déjà vu experience in their lifetime.
- Many of these individuals report multiple déjà vu experiences.
- Reported incidences of déjà vu correspond to an increase in recent surveys, suggesting growing cultural awareness and

acceptance.
- Déjà vu incidences decrease with age.
- Déjà vu incidences increase with education and income.
- Déjà vu is more common in people who travel, have good dream recall, and are liberal in their political and religious beliefs compared with those who do NOT travel, do NOT recall their dreams, and consider themselves conservatives.
- Déjà vu is mainly experienced by people indoors and during leisure or relaxing activity.
- Déjà vu lasts approximately 10 to 30 seconds.
- Déjà vu occurs more often in the evening and on weekends than in the morning and on weekdays.

Courtesy of *The Déjà vu Illusion*, American Psychological Society, Volume 13, Number 6.

With this knowledge the authors of this book would be remiss in their duties if they did not present some of the more unusual theories and potential causes of déjà vu. Perhaps in one of these theories lies the hidden key that will unlock the mysteries of mind, memory, and time.

Paranormal Possibilities

Could déjà vu be a type of precognitive event? Because déjà vu occurs in the present moment, it is impossible to predict when it is going to happen. It comes on suddenly, and ends just as suddenly. Yet it involves the knowledge of an alleged past event recalled in the present, perhaps a type of precognition that is triggered a nanosecond before the actual sensation of the familiar event occurs. Déjà vu also has been linked to psychic ability and remote viewing (the ability to access information from distant locations and people). But because precognition involves knowledge that is known about an event before the actual event occurs, perhaps déjà vu is a glitch in the brain

allowing for an event to be “experienced in memory” so close to the actual physical experience that it throws us for a loop by giving the appearance of a mirror memory—almost as if we just had a flash of realization that we are living in two worlds at the same time. This “mirror memory” suggests no lapse in time, but ask anyone who has had déjà vu and they will tell you that they didn’t feel it coming.

Other, less-scientific theories suggest that déjà vu is the product of the collective unconscious as theorized by psychiatrist Carl Jung, which we discussed earlier. One theory speculates that déjà vu occurs when someone draws upon a similar “archetypal” memory in the collective field of memories of mankind. Jung had this experience on his first trip to Africa when he felt an intense sense of “recognition of immemorially known.” This idea actually has a parallel in the theory of the Zero Point Field (ZPF) in quantum physics, which suggests a repository field of past, present, and future events. Metaphysicians have further drawn upon the idea of a Field of All Possibility, or Pure Potentiality, as author Deepak Chopra refers to it. This is a theoretical clearinghouse of all memory, where there is no linear time, and a person can somehow draw upon a memory in this field that may directly mirror their present experience.

Again, it is impossible to look at this completely objectively. For many who experience déjà vu, and hold this belief in a more paranormal causality, there is no way to actually prove that the person did or did not read, see, or experience something in their distant past that might have triggered the present experience of déjà vu. That subjectivity, again, seemingly eludes scientific explanation, yet it opens the door for a connection to human consciousness and our perception of reality.

We will explore the idea of a field, or Grid, as we authors call it, in later chapters. The idea of an implicate (to borrow from David Bohm) infrastructure of reality, one in which the causes of things we deem unexplainable occur, does hold some merit in both quantum and theoretical physics, as well as in the growing field of consciousness studies. Synchronicities, also a favorite of Carl Jung, who studied and wrote about them extensively, also appear to have a causality that occurs on some implicate level, while we experience only the effects here on this level of the

Grid.

Déjà vu, perhaps, might then be another of those strange and anomalous wonders of human experience that we know happens, but can't pinpoint the cause or origin on how it happens, or more importantly, why it happens. Scientists may refer to the stimulation of the specific parts of the human brain as the cause of déjà vu. Perhaps they are right. Our brains have a role in making it happen. But as of yet, they cannot tell us why it happens. Does it have a purpose, a reason? Is it just a random mistake that happens to some people, and not to others? Or is it a reminder to us that there is far more to reality, and maybe even far more realities, than meets the eye? Is there any certainty as to whether the brain is being stimulated from an interior or exterior influence? If not an interior influence of misfiring circuitry, then what? If exterior, then where is the trigger coming from, and how is it affecting the workings of the brain and our perception of time?

In the next chapter, we will get a better understanding of the human brain, memory, and how it works, or at least what we know according to the most cutting-edge research. And also, how it goes wrong, glitches, malfunctions, and misbehaves. Perhaps by the time we reach the end of this book, we might actually look at those malfunctions and glitches in a whole new way.

Chapter 2

THE MEMORY MAZE

A memory is what is left when something happens and does not completely unhappen.

—Edward de Bono

Memory, of all the powers of the mind, is the most delicate and frail.

—Ben Jonson

The human brain acts as an enormous mental sponge, capturing events for time immemorial in a seemingly inexhaustible storage bank that is capable of holding the memories of past, present, and future within its gray, squishy confines. Though it certainly is possible to forget something in an entirely conscious way (and who hasn't accidently forgotten an important event like a birthday or anniversary!) the brain, much like the elephant, never forgets. As our great-grand-parents used to say, "Done bun can't be undone." Once it happens, the memory seemingly never lets it go. So, if your spouse tells you that he forgot your birthday, you can tell him that the brain never forgets!

So, what exactly is memory? Is it an abstract construct, or can it be defined in exact terms? By definition, memory is nothing more than an organism's ability to encode, store, and then later recall information. Although the concept certainly seems easy enough to comprehend, as we dig deeper into the mechanics of memory, we find that things become a bit more complex. As we shall see later, the brain is an incredibly sophisticated mechanism—significantly faster and more powerful than even the largest computer. And, thankfully, not as crash prone!

Nearly instantaneously, the brain is able to capture the imagery of an event or experience by literally imprinting or encoding it in the brain, thereby creating a permanent record. This record is then indexed and referenced (much like the card catalog system used in the library) so that it can be later accessed, or suppressed, depending upon the event's meaning, interpretation, and overall importance. Who would not wish to recall the joys of childhood? Someone who had an awful childhood, perhaps. A memory of one's wedding day might spark smiles and delight, unless the wedding was to someone who is now taking you for everything you are worth (and then some!). Memory is universal—something that we are all able to access, and, fortunately, pick and choose which memories we will give focus to, and which we will sweep under the rug of the subconscious.

The Study of Memory

Once considered strictly within the realm of philosophy, the study of memory has now become firmly entrenched within the domain of cognitive neuroscience. This emerging field links the disciplines of cognitive psychology and neuroscience to present the most current understanding of how we create memories. In addition, this research also seeks to study how we are able to then find and recall them once they are relegated to the storage banks of the inner recesses of the mind. In a 1996 survey of psychologists, more than 84 percent believed that every experience we have is permanently stored somewhere in the mind (Loftus and Loftus, Schacter 1996, 76). What the brain, or mind, seems to be storing, though, is more in the realm of bits and fragments of information or "sense data," rather than longer "video clips," which are stored as whole chunks of data (think more Twitter than YouTube).

As you would likely expect, there are different types of memory. Sensory memory, which is the shortest term of memory length, occurs within 200 to 500 milliseconds after something is perceived. This is an important fact, and one we shall expand upon further. We observe, we memorize, we recall—all "nearly" instantly. Short-term memory takes this one step further, allowing

for a recall time ranging from a few short seconds to a minute or so. When it comes to short-term memory, our brains seem only able to effectively handle four to six items at a time. Just think about this the next time you go grocery shopping without a list. Calling your spouse won't help, unless he or she tells you each item needed as you shop (or you write it on the back of your hand with a Sharpie).

Much better for shopping without a list is long-term memory, which allows for the storage of greater amounts of information for far longer periods of time. A great example of how long-term memory trumps short-term memory can be vividly demonstrated by attempting to memorize a random 10-digit number. You might be able to remember it for an hour, maybe a day. But your phone number? You'll remember that for years, or at least until you get a new one. This is due not only to repetition, but also to the application of importance. You use your phone number all the time, and it is important to you. Thus, the brain encodes it as a "must have" memory. Much like the speed dial function on telephones, this memory is available for instant recall when necessary.

Different terms of memory require the actions of different parts of the brain. Short-term memory is the domain of the frontal lobe, more specifically the dorsolateral prefrontal cortex, and the parietal lobe. Long-term memory is, interestingly, retained throughout a more widely spread area of the brain in the form of changes made to neural connections that are more permanent.

THE BRAIN AND ITS FUNCTIONING PARTS

- **FRONTAL LOBE**—Thinking, planning, and central executive functions; motor execution.
- **PARIETAL LOBE**—Somatosensory perception integration of visual and somatospatial information.
- **TEMPORAL LOBE**—Language function and auditory perception, involved in long-term memory and emotion.

• **OCCIPITAL LOBE**—Visual perception and processing.

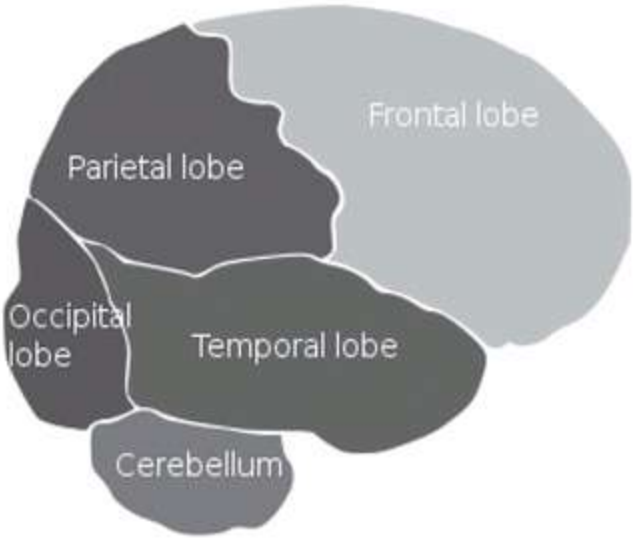


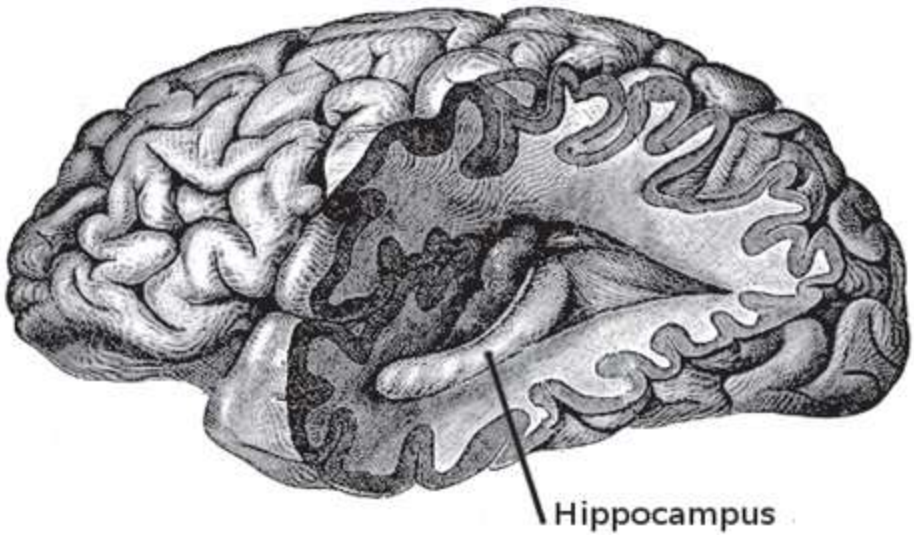
Image courtesy of Wikimedia.

The Hippocampus

For both short- and long-term memory, the hippocampus serves as a vehicle for consolidating information from short- to long-term memory retainment. We can thank our hippocampus for the ability to remember anything beyond what we ate for dinner yesterday. We can also thank our sleep cycle, for without a good night's sleep, our memory becomes deficient. Without sleep, we end up with the inability to store new memories. Much like a computer indexing files on its hard drive, during sleep, the hippocampus reviews and indexes the activities of the day as a means for consolidating and organizing information. T

MEMORY AND THE HIPPOCAMPUS

The hippocampus is located in the center of the limbic system and forms a looping C shape. It is connected to the hypothalamus by the fornix. The hippocampus is critical for the transfer of short-term memories into long-term storage. Although there is still debate as to exactly how this occurs, it is clear that the hippocampus is necessary to file away new memories as they are imprinted.



The significance of the hippocampus is driven home by a famous patient named H.M. During epilepsy surgery in 1953, doctors removed most of his medial temporal lobes including his hippocampus. Since then, he has formed no new memories. He remembers his childhood and everything that happened to him prior to the surgery, and he still has short-term memory ability, as well as the ability to form procedural (skill) memories. He is able to hold a normal, lucid conversation, but if you leave the room for a moment, when you return he will not remember you or the conversation. He has completely lost the ability to lay down declarative (context-related) memory. (Source: *PsyWeb.com*) Image courtesy of Wikimedia.

The most cutting-edge research, fresh out of Case Western Reserve

University in Cleveland, Ohio, suggests that the mossy cells of the hippocampus have the ability to store working memories, even in slices of the brain. Researchers Ben Strowbridge and Phillip Larimer used slices of mice brains to see if the neurons called mossy cells would maintain normal memory storing activity, which they did. The memories, stimulated by electrodes inserted in the slice, lasted only 10 seconds, but that memory could be stored in a piece of the brain and in many differing neurons spread over that area.

Memory Models

Currently, there is no one universally accepted model of the mind/brain and how memory works, but there are many theories that have received strong backing by both neuroscientists and psychologists alike. The most current studies agree that memory is a set of neural connections that are encoded in various locations throughout the brain. The stronger those connections, the stronger the memories.

Much of how well we remember our memories can be attributed to the method and depth of processing involved when we have an experience. Some might say to just rehearse an event over and over, and you will remember it. But that has not been proven as effective. In a 1972 study by Fergus I.M. Craik and Robert S. Lockhart titled “Levels of Processing Model of Memory,” the two psychologists proposed that memory is simply a by-product of the depth of processing of information. For the study, depth was defined as “the meaningfulness extracted from the stimulus rather than in terms of the number of analyses performed upon it.” Again, the emphasis needs to be placed on how important the stimulus is, rather than how many times one is exposed to, or rehearses, it. So, are wedding rehearsals truly necessary? According to the research, no, but don’t tell your spouse that!

Craik and Lockhart’s memory model was in stark contradiction with another theory, the “multi-store model,” also known as the Atkinson-Shiffrin Model, which posited that rehearsal is the only mechanism by which short-term memory is converted to long-term memory. This model also suggests that long-term memory is made up of many subcomponents and originally

believed that the sensory store was composed of a single unit. New research has determined that the sensory store is actually split into many working parts, such as taste, vision, hearing, and so on.

Another, the processing model, instead focuses on the ways in which we process memory:

- **SHALLOW PROCESSING**—Either by structural (appearance), or phonemic (sound) means.
- **DEEP PROCESSING**—Uses "elaboration rehearsal" via images, thinking, associations, and other meaningful analysis (semantic). In other words, we either have to visually experience an event, hear sounds associated with an event, or apply meaning to an event in order for that event to find a home in the walls of our memory bank.

DO YOU RECALL?

In a psychology study by Craik and Tulving in 1975, participants were presented with a series of 60 words, about which they had to answer one of three questions. Some of the questions required the participants to process the word in either a deep way (semantic) or shallow way (structural or phonemic). The goal of the study was to investigate how deep and shallow processing affects memory recall.

Questions took similar form to these:

- Structural/visual processing: "Is the word in capital letters or small letters?"
- Phonemic/auditory processing: "Does the word rhyme with…."
- Semantic processing: "Does the word go in this sentence…?"
- The result of the study showed that participants were able to recall MORE words by using semantic processing rather than phonemic or structural processed words. This suggests

that the "elaboration rehearsal" and deep processing involved in the semantic mode creates more accurate recall.

Maybe this would explain the snarky comment people make when you forget what you were going to say: "Well, it must not have been THAT important!"

But there is a catch, and one that is quite significant. We often do forget things that are important to us. They can be very important, and it often occurs at the most inopportune of times! Birthdays, anniversaries, and work deadlines—it happens to all of us. If the idea behind memory processing is to convert temporary, short-term memory into more permanent, long-term memory, especially when meaning and importance are involved, why do we still find ourselves struggling to recall the name of the actor who played Fish on *Barney Miller*? (Larry's note: Who?) How can it possibly be on the tip of our tongues, despite the fact that that show has been our all-time favorite sitcom throughout the last 30 years? (Larry's note: Ah, okay, a sitcom. Never heard of it!)

Psychologists would suggest that we do one of three things to fight such memory glitches:

1. **REWORKING**—Put information into your own words, or discuss with someone else.
2. **METHOD OF LOCI**—If you are trying to recall a list of items, link each one with a familiar place or route.
3. **IMAGERY**—Associate an image with what you want to remember and encode it onto your brain like a mind map.

I (Larry) have tried all three methods, and number three seems most effective for me. In fact, it has become second nature for me to do this when attempting to remember something significant. These three techniques are quite individual, and we would recommend that you try each one to determine which might be most helpful for remembering those important details!

So, with these three suggestions, have psychologists provided us with the "Holy Grail" method to remember everything? Unfortunately not, as it seems

that many of us already tend to do those things quite often! We often subconsciously use exterior objects or pictures that we create in our heads to remind us of a person, place, or thing we need to recall. We also retain information more accurately when we talk about it, or put it into our own words, which allows us to personalize, or give more meaning to, what we want to recall. Think of cramming for a test when you are sober, your mind is clear, and you have had a good night's sleep. More often than not, you will, if the test is critical, remember far more than you might have imagined. This elaboration, or explanation of importance, is what gets encoded more permanently in our brains. If we need to remember it, on some level, we will.

This then begs the question: On what level are those hard-to-grasp memories stored? And more importantly, how do we access them?

By the way, Marie just remembered who played Fish. It was Abe Vigoda. (Larry's note: Who?)

In his book *The Seven Sins of Memory: How the Mind Forgets and Remembers* , Harvard University's former chair of the psychology department, and leading memory researcher, Daniel Schacter suggests that the memory's "malfunctions" can be divided into seven basic transgressions, or, as he calls them "sins." The first three involve "omission," or the failure to recall facts or ideas. The last four are sons of "commission," and involve memories that are present, but not necessarily desired. These are:

1. **TRANSIENCE**—General deterioration of a memory throughout time due to age and other factors.
2. **ABSENT-MINDEDNESS**—Problems between attention and memory interface. More than likely we have all been accused of this at some point!
3. **BLOCKING**—One memory interferes with the recall of another.
4. **MISATTRIBUTION**—Recollecting information with incorrect recollection regarding the source of that information.
5. **SUGGESTIBILITY**—Past memories are influenced by the way they are recalled, with subtle changes to the original memory due to source information that did not actually occur, or is different from the original memory.
6. **BIAS**—Memory is tainted by worldview, current feelings, or specific

incidences that have occurred during a specific period in one's life. Emotion is often associated with biased memories.

7. **PERSISTENCE**—The unwanted recall of disturbing information, leading to such things as phobias, trauma, stress, and, in the extreme, suicide.

Memories, we are told, tend to fade with age. The hippocampus deep within the brain maintains memory. However, as time goes on, we begin lose the ability to grasp detail. Current studies tell us that, as we age, the participation of the hippocampus wanes, leaving us struggling to remember the name of our high school PE coach, or what embarrassing thing we did on college graduation day (especially if the party that night involved the imbibing of brain-cell impeding alcohol!). A 2006 study by neuroscientist Larry R. Squire at University of California, San Diego, in conjunction with the Veteran Affairs San Diego Healthcare System, took a look at both individuals with damage to the hippocampus, as well as persons with healthy brains. The end result suggested that when one area of the brain declines in ability to recall memory, other regions may step in to pick up the upkeep of storing and recalling memory, especially long term.

This suggests that perhaps we know even less about exactly where in the brain memory is stored. The way the brain creates and then stores memory is still a bit of a mystery, even to those on the cutting edge of brain research.

To take the mystery one step further, current research suggests that memory can rise out of the destruction of older memories, sort of like a phoenix rising from the ashes, and that memory can be wired, and then rewired, into the brain. That concept sounds eerily reminiscent of the cult classic movie *Total Recall* starring Arnold Schwarzenegger. Can memory be erased altogether once it is wired into the brain? It is a question that has long plagued those with traumatic experiences in their pasts that they long to forget.

In the critically acclaimed movie *Eternal Sunshine of the Spotless Mind*, stars Jim Carrey and Kate Winslett pay to have their memories of a shattered love affair removed forever from their minds. But the end result is misery, prompting that age-old adage "Be careful what you wish for." Yet victims of traumatic experiences such as rape, a devastating car accident, loss of a child,

or post-traumatic stress disorder might benefit from particular memories being wiped off the map of their minds permanently.

Post-Traumatic Stress Disorder

Post-traumatic stress disorder (PTSD) can imbed a devastating memory into the neural pathways of the brain, making it impossible to avoid, and for some, impossible to live with. But recent research by scientists and neurologists suggests a very controversial finding: We tend to alter or change our memories as we remember them. This stunning conclusion is based upon the work of Karim Nader of McGill University, who discovered that memory is changed upon remembering, opening the door to altering those debilitating memories that hold people back from enjoying life.

In an article titled “Out of the Past” for the July/August 2009 *Discovery Magazine*, Kathleen McGowan documents the ongoing research into the neural architecture involved in both the storage and recall of memory. “Until recently, long-term memories were thought to be physically etched into our brain, permanent and unchanging,” she writes. “Now it is becoming clear that memories are surprisingly vulnerable and highly dynamic.” This new finding, McGowan states, is a complete about-face for the neuroscience community, who recognize that in a lab setting memories can be turned on or off with a simple dose of a particular drug or stimulant that blocks the actions of certain brain chemicals.

McGill University psychologist Alain Brunet did just this in his research into PTSD and psychological trauma. Dr. Brunet took a patient suffering from extreme PTSD after a horrific accident, and gave her a low dose of a very common blood pressure medication that reduced activity in the amygdala. Because that part of the brain is responsible for processing emotion the study offered a new approach to treatment that had not been attempted previously. Brunet then had the patient listen to a recorded re-creation of her auto accident, something she had done thousands of times before on her own, remembering every awful and horrible detail.

But this time, something different happened. The blood pressure drug

“broke the link between her factual memory and her emotional memory.” It blocked the action of adrenaline, the brain chemical that causes anxiety and even fear. Brunet’s intention was to allow the patient to experience the memory under influence of the drug, to permanently change her perception or recall of the accident, and it worked. The patient never forgot the accident, but by “reshaping” the associated memories of the accident, they no longer had such a terrible hold on her. She was finally free from the emotional and psychological shackles that affected her.

The ability to alter memory could one day help people suffering from a variety of mental illnesses such as OCD, addictions, and debilitating anxiety by letting them “rewire” their brain to lessen the impact of the memory, and maybe even neutralize it completely.

Trusting Our Memories

However, there is a somewhat more negative aspect to this newfound concept of memory as being dynamic and changeable. Notwithstanding the potential ominous implications of government mind control and other speculative conspiracies, how can we now trust our own memories of the past? Are eyewitness reports no longer valid? Should Oprah never have anyone on the show again who claims that his or her memoirs are the rock-bottom truth? As McGowan states, “Every time we remember, it seems, we add new details, shade the facts, prune and tweak. Without realizing it, we continually rewrite the stories of our lives.” She likens memory to imagination, both of which allow for the “conjuring” of worlds that may never have actually existed until they were created in our own minds.

What this says about the true nature of reality is shocking. If we cannot even trust our own recall about what happened in the past, can we even come to grips with who we are now, in the present? Without their “stories,” many people feel cut off at the knees, so to speak. Without their pasts, people feel ungrounded, without identity. Lost. Yet this most cutting-edge research suggests that our past is, at least in part, a construct of our imaginative

reshaping of actual fact.

To take that one step further, research by psychologist Elizabeth Loftus while at the University of Washington, and continued by Nader while he was at New York University studying the neurobiology of fear, led to another stunning realization. It is easy to implant false memories in someone, especially if the memory is a plausible one to the person. Loftus performed a now-famous experiment involving volunteers who were given a booklet that narrated three true stories or life experiences from their childhood. Included, though, was another narrative of an invented story of a little girl who got lost at a shopping mall.

Interestingly, when later asked to write all they could remember of all events, including the phony implant, 25 percent of volunteers were certain that all of the events had happened, including the made-up story!

This work was furthered by David Rubin of Duke University, studying autobiographical memory. Rubin observed that even adult twins can have different memories of an event that occurred to both, suggesting that even the most basic of facts can be mixed up or misconstrued by the parties involved. Time seems to take quite a toll on accuracy. McGowan claims that we may want to stop looking at memory as a “perfect movie of the past” and consider it more of a “shifting collage” or a narrative made up of scraps and bits of the past that are given new form and added, edited, and altered each time we recall them.

Perhaps this is how oral traditions survive and become legend. Jesus Christ may have been a nice guy who helped others, but throughout the course of thousands of years’ worth of memories, he morphed and became a god-like figure to millions. The mere mention of the date December 21, 2012, may have had minor significance to those responsible for creating the Mayan Long Count Calendar, but thousands of years and passed-on memories later, many have come to believe this seminal date to be the literal end of the world, and we, today, are still adding our own spin to the collective memories of the past. And that woman who broke your heart back in college? The one who got away? Perhaps she isn’t so gorgeous and wonderful as your stacked memories have made her out to be today, 20 years later! Heck, that may be fact—just check out her Facebook profile!

Nader, Brunet, and their colleagues are continuing their research into PTSD and the use of other drugs to block, alter, or modify memories. Much to the chagrin of the tin foil hat-wearing conspiracy theorists, this study is being funded with a nice $6.7 million grant from the United States Army.

Add to that the work of Joseph LeDoux, who happened to be Nader's adviser during his college years and a leading authority on fear conditioning. LeDoux's own laboratory research has actually found a way to trigger the reconsolidation of memory without the use of any drug. His belief is that it is all in the timing, and that memory reconsolidation can be achieved by the careful timing of "remembering" sessions.

All of this research is designed to free victims of traumatic memory, not by erasing the memory itself, but weakening its power. "We're turning traumatic memories into regular bad memories," Brunet says. Imagine one day being able to lessen the pain of an accident, experience, or even a broken heart, not by erasing the man or woman from your heart, but lessening their hold on your memory banks! Barbra Streisand had it right when she sang about those "misty water colored memories" in *The Way We Were*:

Mem'ries, may be beautiful and yet What's too painful to remember
We simply choose to forget…

So memory may not be engraved onto the landscape of the brain as originally thought, yet memory continues to define us, shape who we are and what we believe, and why we believe it. How else would we have any sense of identity without turning to our memories of the past to see how far we've come? If we can suppress and change memory, even impair the ability to retrieve it, as a study involving the use of glucocorticoids and rats hopes to prove, then how can we trust it at all? Déjà vu, then, becomes less of an enigma, and another riddle of the mind's vast memory banks we long to solve. Some researchers, such as Dr. Bessel van der Kolk, even suggest that memory function can be interfered with by four different "functional disturbances," documented in his paper "Dissociation and the fragmentary nature of traumatic memories" for the 1995 *Journal of Trauma/ Stress*.

These four disturbances are as follows:

1. **TRAUMATIC AMNESIA**—The loss of memory of a traumatic

experience.

2. **GLOBAL MEMORY IMPAIRMENT**—Difficulty of subjects to construct an accurate account of present and past history.
3. **DISSOCIATIVE PROCESS**—Memories stored as fragments and not unitary wholes.
4. **TRAUMATIC MEMORIES' SENSORIMOTOR ORGANIZATION**—The inability to integrate traumatic memory leading to sensations being fragmented into different sensory components.

Amnesia

Amnesia is a fascinating characteristic of "memory gone wrong" in the human brain. For decades the plot fodder of many a soap opera, amnesia is an abnormal memory functioning disorder of the brain in which the sufferer experiences the restricted (or completely disabled) ability to retrieve stored memories of any event leading up to the onset of the amnesia itself. In other words, someone suffering from amnesia forgets who they were. They have lost their past to the dark and shadowy corners of the brain that once stored them.

FUGGETABOUTIT…

Tune in today to see Victor Newman come back to Oakdale with Bo and Hope and get bumped on the head, forget who he is, and why he is in a town in another soap opera, with two people who belong in a third?

Amnesia is disturbed or disrupted memory. It can be caused by something organic, such as brain damage, use of sedative drugs, trauma, and disease, or have a psychogenic cause, as a defense mechanism for coping with a psychological nightmare such as rape or exposure to war. There are many forms of amnesia:

- **POST-TRAUMATIC AMNESIA**—Usually the result of head injury or trauma, the extent of amnesia corresponds with the degree of injury.
- **GLOBAL TRANSIENT AMNESIA**—The sudden loss of memories of the past or of identity that lasts only a few hours or days, and may be related to activity in hippocampus.
- **ANTEROGRADE AMNESIA**—New events do not get transferred as long-term permanent memories in the brain.
- **RETROGRADE AMNESIA**—The inability to recall memory or memories of the past. This goes far beyond the ordinary state of forgetfulness.
- **SITUATIONAL/LACUNAR AMNESIA**—The loss of memory of a particular situation or event.
- **REPRESSED MEMORY/PSYCHOGENIC AMNESIA** —The inability to recall memories of a traumatic event such as rape, abuse, and crime.
- **FUGUE OR DISSOCIATIVE FUGUE**—Episode/s of amnesia with an inability to recall some or all of one's past or identity, sometimes leading to formation of a new identity in another location.
- **POSTHYPNOTIC AMNESIA**—Events during hypnosis are forgotten and past memories are unable to be recalled.
- **MEMORY DISTRUST SYNDROME**—A person does not trust his or her own memories
- **CHILDHOOD AMNESIA**—No memories of the events of childhood.
- **SOURCE AMNESIA**—Can recall specific information, but not know how and where it was obtained.
- **BLACKOUT**—Complete blackout with anterograde amnesia —often alcohol- and drug-induced.
- **KORSAKOFF'S SYNDROME**—Brain damage caused by severe alcoholism or malnutrition.
- **DRUG-INDUCED AMNESIA**—"Premedicants" used to help patients forget surgery or painful procedure; short-term memory loss during procedure.

- **PROSOPAMNESIA**—The inability to remember faces.
- **CONFABULATORY HYPERMNESIA (SEVERE FALSE MEMORY SYNDROME**)—The inability to discern between real events and imagined or conjured events. Many alleged UFO abductees are often placed in this category.

Though very rare, functioning amnesia allows the sufferer to learn new things and have a normal life, but without the autobiographical anchor to the past. Thankfully, most amnesia bouts are only temporary; however, the amnesic syndrome can be permanent, and no medication is available that can magically restore the forgotten memories of the past. Without this sense of developed self, the prospect of forging a future becomes difficult and frightening. Most extreme cases of all of the amnesias are rare; however, the effects linger on in the lives of those who experience them.

With fugue states, the person retains enough functional ability to drive a car. If a fugue can be considered a “temporary blackout” of memory function, then both authors of this book have experienced a fugue. We will get into those experiences, as well as bizarre “missing time” events in a future chapter!

High-resolution contrast imaging of the brain of those suffering from amnesia generally shows abnormal activity, mainly changes in the limbic functioning. In a study done in 2000 by a Japanese research team, a positron emission topography (PET) scan activation study was performed on psychogenic amnesiacs. The scan showed that there was an increase in the activation of the right anterial medial temporal region, which includes the amygdala. Control patients saw no increase in those regions. Whether amnesia in any of its forms is caused by physical trauma, or psychological means, the end result is a misfire of memory that can last a day, or a lifetime, with only a limited amount of effective treatments to help, not cure, the disorder.

Interestingly, some amnesiacs not only forget their past, but also lose their ability to envision their future. A study for the Proceedings of the National

Academy of Sciences showed that past experience is often used to construct an imagined future. For amnesiacs, the lack of that past foundation or frame experiences inhibits their ability to imagine the outcome of a future event. They have no reference points to work with; they are stuck in a virtual "present limbo."

At the writing of this book, scientists at the Brain Observatory at the University of California in San Diego were preparing to slice the brain of one of the world's most well-known amnesiacs, Henry "H.M." Molaison. Considered the most famous patient in brain science in the 20th century, Molaison suffered from amnesia for more than 50 years, and each individual slice of his brain (yes, he is deceased; we forgot to mention that!) will be examined to determine what specific parts of the brain were involved in his disorder. The images will be available on the Web, so by the time this book is on the shelves, we should all be able to see inside the brain of a man who couldn't remember for five decades of his life. In fact, the site has already been getting more than 3 million hits as people tune in to watch the live action "brain cutting."

Intriguingly, part of Molaison's brain had been removed 50 years ago, when he underwent surgery to try to improve his epileptic seizures. The surgery, during which much of the hippocampus was removed, did improve the seizures, but at the cost of his memory. Afterward, Molaison was only able to retain memories for about 30 seconds maximum. Now, the remainder of his hippocampus will be dissected and images will hopefully reveal additional clues into the world of amnesia and the particular brain associations that trigger it.

Throughout our lives, most of us will experience minor bouts of amnesia. Whether it is something as trivial as misplacing our car keys or forgetting to pick up milk on the way home, at some point we will all have "been there, done that." These little disturbances in short-term memory recall are amplified by stress, multitasking, and the sheer volume of information that we are today forced to take in, process, and do something with. Memory-related diseases such as dementia and Alzheimer's steal the past from those afflicted, but if we can finally understand exactly how memory is formed, stored, and recalled, then we might one day be able to trigger the sections of

the brain involved in restoring normal memory function.

The frightening thing is how fragile our memory is. We can mess up our memory with simple things, such as having high blood sugar, too much stress, or a lack of good sleeping habits. High blood sugar has shown up in the MRIs of people with memory issues and can cause damage to parts of the brain that effect memory. Stress that leads to poor sleep can also effect the ability of the brain to process and recall memory, as well as damage the hippocampus from an over-abundance of the “stress chemical,” cortisol. Stress also affects the medial temporal /diencephalic system, which can inhibit the retrieval of memories, resulting in a sense of lost identity. Even sleep apnea is linked to the death of necessary brain cells for proper memory function.

Although the human brain has been compared to a massive parallel supercomputer, there certainly are some significant distinctions. Our brain may be thought of as a “slow” computer of sorts, unable to fully process all of the information that bombards it daily, picking and choosing what to pay attention to immediately, and what to store for later processing and use. Some researchers, such as Catriona Morrison of the University of Leeds in the UK, suggest that the use of music can help improve the brain’s ability to store and retrieve information. Listening to the music that we love triggers the release of dopamine, the feel-good drug of the brain, and this in turn helps to promote the storage of memory. Morrison’s work with people who share their recollections of the Beatles’ music on her Website indicates that memories are often sparked by the mere mention of a band, album, or song. Furthermore, if we first heard that song in a particular location or during a memorable experience we never forget it.

Marie will never forget the sheer detail of the Tappan Zee Bridge while the song “Sugar, Sugar” by the Archie’s was being played. To this day, all she has to do is hear the song and there is the bridge in all its glory. For Larry, the song “Just Like Heaven” by the Cure instantly evokes a flood of memories from a time in high school back in Ohio driving to downtown Dayton with a car full of friends to listen to a band at a local teen nightclub. Music truly can move one to experience deep-seated memories. Morrison feels music helps us to process information more deeply, thus assuring its more permanent storage

in the brain’s memory banks. And the happier the song makes us, the more dopamine is released. The memory becomes more entrenched.

For the thousands battling Alzheimer’s, for which there is no known cure, loss of memory is not only an annoyance, but also a tragedy. Yet, as cutting-edge research tells us, even when we do remember, we may not be able to entirely trust our memories. Neural circuitry is susceptible to memories of events that never really happened, happened to someone else, or happened in an entirely different manner than the one being recalled. And perhaps memory can include glimpses into other realities, where we are having other memories. Déjà vu, anyone?

Chapter 3

THE OTHER SIDE OF NORMAL

A psychiatrist asked her multiple personality disorder patient "So, do you feel like you're cured?" He replied, "Absolutely, we've never felt better!"

—Anonymous

Everybody hates a prodigy, detests an old head on young shoulders.

—Erasmus

Your cell phone rings; it's your best friend, Joe, asking if you recall who the actor was in the movie you saw the night before—the one with the long goatee and buck teeth, distinctive limp, and a combo French/Bronx accent (and no, it was not your cousin Jedediah). It's an actor you've seen in dozens of movies, and you admire both his comedic timing and his awesome skill at making French sound like a nasal New York accent. But, this time, for the life of you, you simply cannot recall his name. You can see his face clear as day in your mind, hear his voice even. But his name is eluding you, dancing somewhere teasingly on the *tip of the tongue*.

Tip of the Tongue

Believe it or not, Tip of the Tongue Syndrome (TOT) is a real phenomenon with an actual name: presque vu. Similar to déjà vu, it appears

as a memory glitch that makes it difficult to retrieve information you should know—information you've had no problem retrieving before. It is literally the blockage of a particular word or name from the vast storing-house of the brain's memory. It's there, but you cannot access it—until hours later when you are in the shower and you suddenly have that "eureka!" moment of total recall (which usually happens when you have taken your mind off the very word you are trying to remember).

In 1966, two Harvard psychologists undertook serious studies involving TOT. Roger Brown and David McNeill found that this phenomenon is not only universal, but can occur as often as once a week, often increasing as one gets older. It is quite annoying to those who experience it, especially when you can only remember the first letter of the word, and nothing more. Their research indicated that approximately half of the time you will indeed remember the word during an actual TOT episode. But for those of us who don't, getting the brain involved in something else often triggers the recall.

Similar to its sister, Slip of the Tongue, TOTs involve the brain's anterior cingulate and right middle frontal cortices, and often someone experiencing a TOT can use visual cues to help in recall. A whole body of study is devoted to this annoying "brain fart," as it is so often referred to in the modern lexicon, and its relationship to memory retrieval and how it works in the brain. One hypothesis suggests TOT is caused by the sensitivity to the existence of an unrecalled target in memory, accompanied by failure to retrieve the target into conscious memory. Known as the "incomplete activation hypothesis," it indicates that there may be some kind of disruption occurring between a memory stored in our subconscious, and perhaps its inability to be brought up to a fully conscious level.

But TOTs are the least devastating when considering the many ways the brain malfunctions when it comes to memory. We can live with the occasional inability to recall Dr. Phil's last name (damn, it's on the tip of our tongue…McGhee? McDougal? McDonald's?), but living without any memory of what you did for four hours the night before—or perhaps what you did, with whom, and where, the entire night before….

Blackouts

Blackouts are often referred to as “alcohol related amnesia,” because they are most often associated with binge drinking. As many college kids have discovered, this often leads to a complete loss of memory of the immediate past. (Loss of consciousness from intoxication is known as “passing out,” not blacking out.) Oftentimes, people who drink to the point of blacking out experience a type of amnesia that prevents the recollection of events during the period of intoxication. We know from many studies that alcohol impairs long-term memory function. But during the actual time one is intoxicated, the rapid increase of the drinker’s blood alcohol (BAC) level causes impairment resulting in the inability to remember what they were doing prior to the time their brain clears. Even then, they can experience “brownouts,” vague and fuzzy memories of what they did, and with whom.

This usually results in the level of shame many alcoholics feel after a binge, when they are told by outside parties of their actions and behaviors. Perhaps you have heard of (but hopefully never experienced!) the “walk of shame”?

Dissociative Amnesia

But binge drinking is not necessary to experience a blacking out of memory. Dissociative amnesia, which we touched upon in the previous chapter, can do the trick. One of many dissociative disorders that disrupt the breakdowns of memory, conscious awareness, and even identity, dissociative amnesia can turn a person’s life upside down by severely disrupting their general ability to function, not to mention affecting their overall quality of life. Where regular amnesia involves the loss of memory from a usually injured brain or disease affecting the brain, dissociative amnesia does not involve loss of memory, but suppression to the point of not being able to recall them from the depths of the mind. At some point later, a trigger in the environment may lead to total recall, but during the period of amnesia, both past memories and personal details about one’s life can be temporarily lost in

the void.

Severe stress and trauma are often linked to this mental disorder, and it seems that women are more affected than men. Dissociative amnesia is often found in soldiers during wartime, as well as victims of catastrophic natural or manmade disasters.

Fugues

Similar to dissociative amnesia, dissociative fugue states involve more unusual symptoms. Fortunately, fugues are not that common, but when they do occur, they provide fascinating glimpses into the misworkings of the otherwise “normal” brain. A fugue is an episode of memory loss, usually accompanied by travel away from home that is sudden and unexpected. As swift as its appearance, the fugue also disappears just as quickly. Yet there is more to this bizarre condition, for those in a fugue have only some or no memory of their past, and often forget their entire identity. In extreme cases, there have been cases of people going somewhere else and assimilating a whole new identity!

So, the big question is why? Why do we experience these weird brain skips? The usual causes are often attributed to severe trauma—either physical or neuropsychological. Childhood abuse is often a factor, too, and luckily most fugues, once they commence, only last for a few hours or a few days. Some do go on for weeks, even months, and sufferers may be found in another town or state with a new name and a new job, and wholly unaware of the life they left behind. Early life trauma can cause the sudden onset of a fugue, but often something like an extremely draining and stressful divorce, unexpected job loss, or depression-fueled suicidal tendencies can contribute to the fugue. Some believe that fugue states may be a defense mechanism devised by the brain and memory to shield a person from the severity of emotional or psychological distress.

Three “symptoms” must be present to identify an actual fugue from dissociative amnesia. A fugue requires:

1. A sudden and unexpected travel away from the home/workplace

accompanied by no recall of the past.
2. Assumption of new a identity, or confusion of personal identity and lack of detail recall.
3. Severe stress and physical or neuropsychological impairment.

Those in a fugue state are aware of their travel away from their former world. In fact, the escape from their past is often quite purposeful, suggesting they are able to function fully, but in the context of an entire *new* identity. Where déjà vu is like a doubling of memory, fugue is the apparent erasure of memory, even if it is temporary.

There are a number of studied fugue cases on the record, but perhaps the most famous fugue is alleged to have occurred to mystery author Agatha Christie. Christie is said to have vanished on December 3, 1926, and reappeared 11 days later in a hotel in another town with no memory of what had happened to her during those 11 days. Christie's biographer, Andrew Norman, wrote that he looked at medical cases on record of fugue states in an attempt to explain Christie's vanishing act, which supposedly began around 9:45 p.m. on Friday, December 3rd, when Christie drove off from her home in Styles, Berkshire (England). After 11 days of conjecture and speculation, including rumors that she had died, drowned, been murdered, or undertaken a very clever publicity stunt, the author was discovered alone, using the assumed name of Teresa Neele at a spa hotel in Harrogate. She had been at the spa, undiscovered, despite newspaper headlines about her disappearance.

Ultimately, it was decided that her condition matched a fugue state, with more rumors flying about why she suffered one, including everything from a car accident to emotional distress over her husband's alleged affair. Norman believes that she may have been suicidal, and later wrote about her experience in her novel entitled *Unfinished Portrait.*

Another fugue case involves a reporter named Jody Roberts, who disappeared in 1985 and was found 12 years later living in Alaska under the new identity of Jane Dee Williams. In an article for the August 1997 issue of *People* magazine reporter William Plummer documented the strange case. Roberts, a reporter for the *News Tribune* in Tacoma, Washington, suddenly vanished in May of 1985.

Her family and friends initially thought she had taken time off, or gone undercover for a story, but when she didn't turn up for days, and then months, and finally years, they began to believe that she was dead, until she turned up 12 years later in Alaska living under the new identity of Jane Dee Williams, a married Website designer and mother of four girls. She had no memory at all of her life before that fateful day in May of 1985, when she had been found in a mall in Aurora, Colorado, more than a thousand miles from home with no identification.

Sgt. Jeff Spring of the Aurora Police Department stated that she was dazed and "out of it." Roberts/Williams was taken to a local hospital, and then to the Colorado Mental Health Institute where she was diagnosed with psychogenic fugue. She was discovered all those years later when local newscasts in Tacoma reopened her case as a homicide and she was identified. Interestingly, the fugue state that she experienced is usually associated with severe trauma as a trigger, and friends reported that in the weeks prior to her disappearance, Roberts had stopped bathing, seemed upset, and was drinking large amounts of alcohol.

Roberts suffered from functional amnesia, as opposed to traditional amnesia caused by brain damage or injury. Regardless of the type, a life had been lost, and a new one gained; though Roberts described her new life as happy and peaceful, the damage would no doubt be tremendous for those she left behind.

Memory Loss Triggers

Something as simple as a vitamin or mineral deficiency can cause a type of memory loss that also involves confabulation, or the creation of false memories. Korsakoff 's Syndrome is caused by the lack of thiamine (vitamin B1) in the brain, and manifests in a variety of symptoms, including anterograde amnesia, severe memory loss, tremors, paralysis of eye muscles, invented memories to fill in gaps during blackouts, apathy, and indifference. In extreme cases, it may even lead to a coma. Named for neuropsychiatrist

Sergei Korsakoff, who developed the theory, the parts of the brain affected by thiamine deficiency involve the medial thalamus and parts of the hypothalamus, as well as general cerebral atrophy. The disease is often accompanied by loss and damage to neurons and supporting cells in the central nervous system, as well as possible hemorrhages in the mammillary bodies.

Both chronic alcohol use and severe malnutrition are often cited as contributing causes of the condition, and even the prolonged vomiting associated with chemotherapy and eating disorders have been implicated as triggers to Korsakoff ’s Syndrome. Strangely, reports also exist of the syndrome developing after a particular scary-sounding Japanese centipede called a mukade has bitten victims. For some reason, I (Larry) just had a brilliant idea for a new, low-budget movie: *Godzilla vs. Mukade*. Hey, I never claimed to be a film expert!

Confabulation

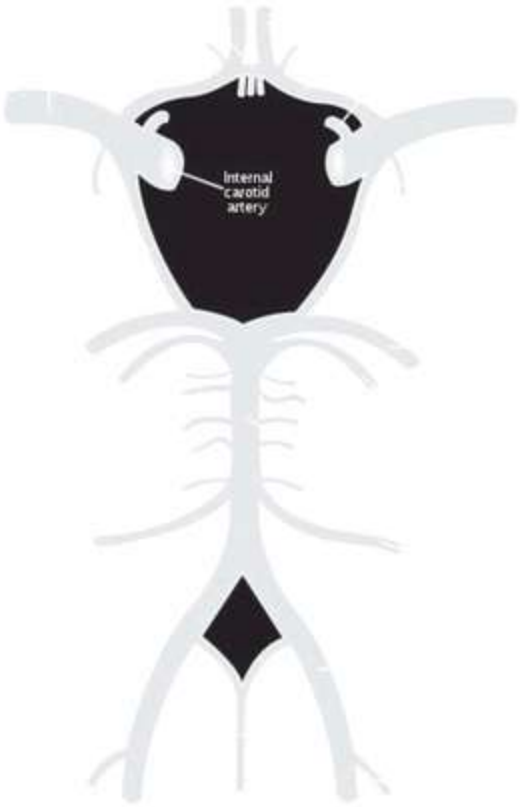
The most intriguing aspect of this syndrome, though, is one of its symptoms: confabulation. Confabulation is often found in people who suffer brain damage or lesions to a particular part of the prefrontal cortical region. It may also occur after damage to the anterior communicating artery in the Circle of Willis, which is the cerebral arterial circle that provides blood to the brain. Military agents and deliriant drugs may also cause confabulatory memories, which basically are memories that are guessed at or imagined, likely in an effort to the fill gaps in actual memory loss.

The fragility of memory can’t be more obvious than when someone confabulates. They can create detailed memories of events and circumstances that never happened, and actually become fully convinced of their newfound perceptions and beliefs. In normal brain function, we have the ability to distinguish imaginings and guesses from real memories. Some cases suggest that with confabulation, the brain chemistry can actually change, resulting in the abnormal mapping and activation of neurons to brain activity. False memory is similar in that it also involves the collapse of normal source monitoring, the process that allows us to normally distinguish between an

internal and external derived memory source.

There are several competing theories to define the mechanisms by which confabulation occurs, from the idea that memory is not stored in the unitary form that we once thought, to the failure to attribute a false memory to the correct corresponding source (such as remembering something based upon a totally unrelated source). Perhaps the true answer may lie somewhere in between?

Figure 3.1 *Whachoo talkin' about, Willis? The Circle of Willis is the area of the brain associated with confabulation, or the formation of false memory, perception, or belief.*
Image courtesy of Wikipedia.



Amnesia Cases

Generally, amnesia syndromes, including fugues, can be medically treated to some degree, and are not fatal. These disorders may be a type of coping mechanism, which allow the brain to face the unfaceable for the many who struggle with the horrific memories of abuse, war, or injury. If there is a neuropsychological cause, we must consider the wisdom of the brain to wipe out memories allowing for the functionality of everyday life. A recent dissociative amnesia case made headlines. The Associated Press reported in the *Seattle Times* on September 17, 2009, that a man named Edward Lighthart had finally been identified after a major newspaper published his picture and story. Lighthart had literally walked away from his life seven weeks prior, and was found walking out of a park in Seattle, Washington, extremely disoriented and unable to remember who he was, or how he got there. He was taken to the Swedish Medical Center and diagnosed with the rare disorder of dissociative amnesia by a team of doctors.

The 53-year-old man is just now beginning to recall tiny snippets of the life he mysteriously left behind, a life that included a career as an international business consultant who spoke English, French, and German. He has fragments of memories of living in a number of cities worldwide. And he has a very troubling memory of the tragic death of his wife, who suddenly died in 1985. It is certainly possible that very memory is the potential reason for his amnesia. Lighthart found her body in their small Chicago apartment, and the trauma may have taken root at that time. Interestingly, this amnesia episode was not his first, and he has little, if any, memories of the gaps in between. In the article he says that he is reluctant to contact the people from his pre-amnesia life. “I think in most cases it’s been that I don’t recognize them. It’s just been fear of the unknown.”

But sometimes, severe and extreme trauma may lead to the brain doing something far more drastic, and potentially more damaging than erasing or overriding memory. It splinters into multiple personalities, each with their own memories, their own perceptions, and their own beliefs. Many “mini-me’s,” if you will.

Schizophrenia

Schizophrenia is a chronic and severe brain disorder that involves the disabling of cognitive thought, memory, and perception. According to the National Institute of Mental Health:

- Approximately 2.4 million American adults, or about 1.1 percent of the population age 18 and older have schizophrenia.
- Schizophrenia affects men and women with equal frequency.
- Schizophrenia often first appears in men in their late teens or early 20s. Women are generally affected in their 20s or early 30s.

Schizophrenia involves a wide variety of symptoms that are treatable, but can totally disrupt the lives of both the victims and their associated friends and loved ones. Medically, there is still a heated debate regarding the root cause of this disorder. However, most experts point to a high genetic influence among many patients. In addition, environmental factors combined with genetics may help to trigger the disorder, as can illicit drugs and a dopamine imbalance. Some medical experts suggest that schizophrenic brains contain more dopamine receptors than those of the normal population.

No matter the cause, the disorder causes hallucinations, paranoia, the hearing of voices, false and distorted memories, and extreme agitation. Many victims completely lose touch with reality, often withdrawing completely from society. Some sit for hours at a time in an almost catatonic state, neither talking nor moving at all. Another common symptom is delusion. Schizophrenics often have delusions of grandeur or importance, and frequently feel that they are victims of mind control or some special government conspiracy or experiment, leading to paranoia and beliefs of persecution. Larry’s note: I wonder if this might help to explain some (but thankfully a very small percentage!) of the horribly conceited, self-aggrandizing, paranoid people whom I have had the unfortunate luck of meeting in the fields of ufology and paranormal research?

Victims cannot process thought in a normal manner, and memory and cognition are hampered, if not outright debilitated. The most affected part of memory is “working memory,” the ability to store recently learned information and then use it shortly afterward, something most of us take for

granted.

Personality Disorders

Schizophrenia takes the “person” out of the person, yet unlike a fugue it does not necessarily involve the replacement of identity as much as it does a distortion of it. To take this one step further, we must examine a terrifying disorder that not only distorts identity, but also adds additional identities to the existing “host.” Once known as multiple personality disorder, dissociative identity disorder (DID) is a mental illness that involves the sufferer experiencing more than one personality or identity. These are not just “two sides of one face,” but actual personalities with completely different views and perceptions of reality, existence, and their place in the world. Strangely, there have even been individuals that exhibit totally different physiological reactions, such as blood pressure, pulse, emotions, and even vision and hearing! EEG studies have shown some differences in distinct physiological markers in the brain between alternate personalities, including cerebral blood flow. Perhaps these are not solely the result of brain abnormalities, but of changes in mood, muscle tension, and concentration between personalities.

The idea of a person splitting off into different personalities is usually associated with the most brutal and severe physical and emotional traumas, such as repeated rape, incest, torture, beatings, starvation, imprisonment, and other extreme stressors. When these splits occur, awareness and memory of the originating causes are buried deep within the subconscious so that the sufferer can survive the trauma.

Much of this might occur when the sufferer is a child, as a defense mechanism for coping with the utterly shocking assault on the body and mind. Though it is still being argued in the halls of medicine and academia, there is still debate as to whether DID is a real disease, or a cultural-based syndrome. (Most DID cases have been documented in North America.) There have even been famous cases, with one of the most notorious being that of Chris Sizemore, a woman whose story was told in the 1953 film *The Three Faces of Eve*. Her disorder began as a child witnessing a series of brutal accidents, after which she splintered into distinct personalities that were fully

integrated into one nearly a year later. The movie portrayed her as having three personalities, but the true story states that Sizemore lived for some time with 22 personalities, and that it took more than 45 years to integrate back into a functional state.

Figure 3.2 *Shirley Ardell Mason, the real "Sybil." Image courtesy of Wikipedia*

Most of us recall the book and subsequent mini-series *Sybil*, which portrayed the life story of Shirley Ardell Mason. As a child, her own mother, a religious fanatic, physically, emotionally, and sexually abused her. To cope with this horrific trauma, Mason splintered into 13 to 16 personalities (depending on the source) that were later integrated with the help of a steadfast and caring psychiatrist named Cornelia B. Wilbur.

Some of the alternate personalities that manifest in a DID situation can actually have their own age, race, cultural, and religious beliefs from the main personality. According to WebMD, these "alters" can even take the form of animals or imaginary characters. "Switching" occurs when one

personality takes over the main person and reveals itself, often having its own dialect, accent, body language, and distinct thought processing.

We might think of DID as a very extreme version of the kind of mild disassociation we often feel when we are daydreaming, ill, or perhaps engrossed in a hobby or project—all of those moments when we don't feel in our bodies, or somehow feel disjointed or disconnected. Luckily, this feeling generally only lasts a few seconds, or moments, but for those suffering true diagnosed DID, it can last a lifetime unless some type of integration into a cohesive, solid unit is achieved, often following years of intense psychotherapy.

Amnesia and missing time are two key factors involved in DID, as are out-of-body experiences, suggesting that perhaps those who experience out of body travel are simply undergoing a brief episode of dissociative identity/amnesia. Sufferers have an innate ability to dissociate memories or experiences from consciousness, and, in fact, there is a transient impairment of consciousness associated with DID patients, although most mystical-oriented out of body journeyers do not experience the convulsions, tremors, hysteria, and convulsions that many DID patients do. Nor do they experience the very real "flashbacks" to the originating traumatic cause of the disassociation, which often increase the level of anxiety and trauma all over again in the patient.

The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) has long been considered to be the bible of mental illness. The DSM-II describes the criteria for a true diagnosis of DID as:

- The presence of two or more distinct personality states or identities, each with its own relatively enduring pattern of perceiving, relating to, and thinking about the environment and self.
- At least two of these identities or personality states recurrently take control of the person's behavior.
- The inability to recall important personal information that is too extensive to be explained by ordinary forgetfulness.
- The disturbance is not due to the direct physiological effects of a substance (blackouts or chaotic behavior during alcohol intoxication)

or a general medical condition.

- In children, the symptoms are not attributable to imaginary playmates or other fantasy play.
- A patient's history, x-rays, blood tests, and other procedures can be used to eliminate the possibility that symptoms are due to traumatic brain injury, medication, sleep deprivation, or intoxicants, all of which can mimic symptoms of DID.

Some in the psychiatric community suggest DID is not a "real" disorder, but one that suddenly appeared on scene after the media popularized the concept in books and movies. Among psychologists there is a common belief that DID is a behavioral-driven syndrome, perhaps a form of hystero-epilepsy, driven by suggestion during therapy. This theory has been supported by the insightful work of Stephen E. Buie, MD, who is the director of the Dissociative Disorders Treatment Program in North Carolina. Buie suggests that alternate personalities may reveal themselves upon elicitation by the therapist, and some patients may be suggestible enough to believe they have DID and thus behave accordingly, manifesting personalities out of compliance. Interestingly, this happened after media coverage of the book *Sybil* came out in 1974. Six years later, the DSM-III listed the diagnosis of multiple personality disorder for the first time and, as media coverage increased, so too did the reported diagnoses. In 1980 there were 200 reported cases, jumping to 20,000 or more between 1980 and 1990. Amazingly, between 1985 and 1995 there were 40,000 cases reported, suggesting an element of hysteria at play.

No matter the case, the idea that one can splinter off into separate identities with separate memories of particular incidences in what is really only one reality suggests a malleability of the human mind, as well as memory overall. The concept of Jekyll and Hyde, made famous in Robert Louis Stevenson's *Strange Case of Dr. Jekyll and Mr. Hyde*, suggests that we all have the latent capacity to be more than one person at a time, and indeed we have different facets to our personality. But DID really takes this to an extreme, with those differences crossing into territory most of us hope we will never journey through.

But the "abnormal" brain might not always mean the deactivation of

memory or the disorder of thought processes. It may not always lead to the loss of the past, or the inability to envision the future, or the taking on of a whole new identity in another town, or even the creation of 16 different identities to survive a traumatic event. Sometimes, the abnormal brain can manifest in a stunning way, empowering and enlivening specific parts of the brain, which in the vast majority of the human population lay dormant or ineffectively used.

Thus, we have the prodigy and the savant.

Prodigies and Savants

A child prodigy is someone who is able to master one or more adult-level skills at a very early age. Usually under the age of 15, prodigies display amazing abilities far beyond their years, and exhibit recall far beyond the normal long-term working memory capacity of the average child. These *wunderkinds*, German for "wonder children," have given the world the likes of Mozart, Picasso, Liszt, Yo-Yo Ma, Midori, and a host of other musical, artistic, and scientific geniuses of exceptional talent.

Theories abound regarding the origin of the prodigy. Is it nature or nurture? It seems that there may be evidence for both. Child prodigy Michael Kearney graduated college at the age of 10; however, Kearney was not born brilliant. In fact, he was born to a mother who had been suffering from toxemia and anorexia during her pregnancy, resulting in a child that doctors insisted would be retarded.

But baby Kearney obviously had other plans, and began talking at 10 months, reading at 11 months, and mastering algebra at the ripe old age of 3. Kearney did not see himself as special, but as a regular kid who hung out with friends and played video games. But at the age of 14 he received his master's degree in biochemistry and did his thesis on the growth of cancer cells. As if that wasn't enough, Kearney also went on to win a one-million-dollar prize playing a difficult online reality game!

But not all geniuses started out as prodigies. Albert Einstein, the very poster child of genius, was said to have been a slow learner as a child, proving it's never too late to become brilliant! Yet for those who do bud into their fullest potential as children, the jury is still out as to whether it is inherited, the result of great parenting and inspiring teachers, genetics, or all in the brain. There are teachers such as Juilliard's Dorothy DeLay, who seems to train an awful lot of violin prodigies (although many wonder if it is the students' grueling rehearsal schedules that often last 10 to 12 hours each day!), and, intriguingly, there are certain parts of the world that produce more prodigies than others. During the early 20th century, Russia and Eastern Europe produced a large number of prodigies, many of them great violinists of Jewish descent. Some argue that, during this time, Jews were not allowed to live in capital cities unless they were prodigies and that parents strongly encouraged their children to study hard.

Nowadays, we often look to the east, the Far East, for mathematical and scientific prodigies. Japan, China, and Taiwan all ascribe to incredibly hard work ethics, and many children are driven to excel and succeed in ways that most North Americans and Europeans are not used to. Asian countries also produce a large number of musical prodigies, proving that hard work and creativity certainly can go hand in hand, and resulting in the brilliant techniques of young violinists and musical prodigies that may not even be old enough to feel the emotional connection to the music they so skillfully play.

Being a child prodigy certainly can have its benefits, but when these children become adults, the novelty of their amazing talent often wears off, frequently resulting in depression, anxiety, misery, and other mental disorders as they struggle to find a new place and new identity in a grown-up world that once embraced their differences.

Not all prodigies are ordinary children with extraordinary abilities, however. Not all prodigies are, in a sense, even children. Savant syndrome is a rare condition in which a person with some type of developmental disorder (autism, retardation, and so on) or brain injury/disease is somehow able to excel in one or more areas of ability or skill, to the point of brilliance. The savant is limited in his or her normal functioning capabilities, yet when it comes to math, geography, or even chess, he or she cannot be topped. Often

their abilities are jaw-dropping in nature, and may even be seen as “paranormal.”

There are savants who are not in any way developmentally disabled except for their amazing skills, but we cannot rule out brain injury or disease as a trigger. All savants, though, have memories of their specific skill areas that are exceedingly narrow, but incredibly sharp and detailed. Similar to those who have the uncanny ability to photographically memorize a book, savants can recall every note of a piece of music they just heard and play it back without a sour note. Savants can often recall the names of every president and vice president that ever lived in order of service, or they can compute the most intricate mathematical problems by accessing this narrow band of memory recall.

According to the research of Darold Treffert, one in 10 autistic persons is a savant. Fifty percent of savants are autistic, with the other 50 percent having mental retardation, brain injury, or brain disease. There are six times more male savants than female. The term *idiot savant* was once applied to the condition by John Langdon Down in 1887. Down, known for defining the description of Down Syndrome, applied the term to savants with an IQ lower than 20, until further research showed many savants had IQs of 40 and up. Savants can be brilliantly intelligent in one arena, and function below normal capability in others.

As with most mental disorders involving the brain, memory, and ability, theories abound as to the origins of savant syndrome. There is no widely accepted “cause,” yet evidence of many factors exists. Frontotemporal lobe stimulation has been found to cause savant-like abilities to arise in people who are exposed to direct low frequency magnetic pulses. The idea is that once this region of the brain becomes more inactive, there is more direct processing of particular skills that are associated with savant syndrome, such as the ability to recall huge amounts of information, or rapid counting of a large sum of numbers.

Perhaps we are all latent savants, with the amazing skills and talents these special people display laying in wait in the brain, but not normally accessible in our day-to-day functioning. One hypothesis suggests savants may be experiencing hyper-systemization, which allows them to access enhanced

detail and perception. Perhaps there may be a little “Rain Man” in all of us, referencing the popular movie starring Tom Cruise and Dustin Hoffman. Hoffman played a likable autistic savant named Charlie Babbitt, who has amazing memory recall, but the inability to understand the subject matter he is recalling. This hidden potential may be in all of us, but may require an alteration of memory circuitry to manifest.

Treffert, in a paper titled “Is There A Little ‘Rain Man’ in Each of Us?” for the Wisconsin Medical Society, writes that he believes we probably all do have some level of savant-like skills and capacity. He also suggests that many savants suffered from “some sort of prenatal, perinatal, or postnatal central nervous system damage, from a variety of genetic, injury, or disease processes and that they have substituted right brain capacity in a compensatory manner for left brain dysfunction and limitation.” Many instances of savant syndrome also seem to be an “acquired” form of the condition, rather than a genetic or inborn defect. In other words, for many savants, their special abilities may emerge as they grow out of the infant stage.

Treffert points to the most interesting research regarding “hidden potential” from Dr. Bruce Miller. Dr. Miller and his colleagues wrote about their findings in the October 1998 issue of *Neurology*. They described five cases of older adults who acquired new artistic skills with the onset and progression of frontotemporal dementia (FTD). The emergence of savant skills in older adults is not new, but as Treffert points out, the unfolding of such skills in “previously non-disabled, older adults is most intriguing.”

Drs. Alan Snyder and D. John Mitchell of the Centre for the Mind in Australia agree that mechanisms behind savant skills can be in all of us, but most of us do not normally access these mechanisms. In an article for the *Proceedings of the Royal Society of London* they propose that savant skills represent brain processes that we all experience regularly, but “they are swamped and buried by more sophisticated conceptual cognition and the savant-like capacities remain largely at an unconscious level.”

The idea that our brains, and our consciousness, harbor such innate genius abilities is inspiring, suggesting that the greatest untapped mysteries lay dormant within us. Those of us with the right circuitry can tap into these

amazing skills, and perhaps we can find the ways and means of doing so on a more regular basis, whether via stimulation to certain sections of the brain, or our own physical effort. It is interesting to note that as people get older, if they do not fall prey to dementia's grip on memory and cognition, many retired folks do seem to tap into a hidden or latent talent. Think about Grandma Moses and other seniors who found fame, fortune, or both in their later years. Maybe all it takes for us to find our inner Rain Man is time, the freedom to pursue more right brain interests, and the effort to use our brains for more than just the basic requirements to get by from day to day.

It may not, as Treffert found, require some kind of head injury or stroke to suddenly enable us to uncover a latent ability. Yes, those cases are on the record, but perhaps all it takes is a good mid-life crisis to get us to pay attention to a long-desired dream or goal, and then find out we had the talent and skill for it all along, hiding out somewhere in the inner recesses of the mind. A-ha! So, perhaps the mid-life crisis really does provide justification for that new Corvette and gold jewelry!

Dr. Lee Warren wrote in his book, *The Power Latent in Man*, that most definitions of intelligence say nothing about the source of that intelligence. "Intelligence is far too vast to be limited exclusively to the physical body or located primarily in the brain," he states, citing current research theorizing that intelligence is non-local and not bound to our brains. When it comes to savants, Dr. Warren ponders, "Does their knowledge show that a source of intelligence exists? Is it possible to tap into this source and not know of its existence?"

Though Warren cites in his book that there are many theories as to how savants access this unlimited information, from genetic to biological abnormalities, he also points to a very unusual source: quantum physics. Specifically referenced is Bells' theorem of non-locality, which also suggests a "field" of potential. Perhaps the savant brain is somehow able to tap into this field of potential and access an unlimited storehouse of knowledge that is freely available to any of us—that is, if we knew the means to access it ourselves.

Treffert writes about the possibility of genetic memory as the means by which savants find their brilliance. In his article for the Wisconsin Medical

Society titled “Ancestral or Genetic Memory: Factory Installed Software,” he explores the concept that the knowledge savants display is embedded in our genetic memory. “These savants have innate access to complex knowledge they clearly have never learned. They remember, genetically, things they have never learned.” The idea that our genes may hold a collective memory of vast skill and information is not a new one, and Treffert points to earlier research labeling such a concept as “congenital gifts,” extraordinary aptitude for certain mental activity that could not have normally been accessed by the individual.

Three Types of Memory

Wilder Penfield wrote about three types of memory in his book *Mystery of the Mind* in 1978. There is racial memory, which is also called genetic or ancestral memory. There is memory associated with “conditioned reflexes,” and the third type of memory involves “experiential” memory. This type of memory seems to be divided into two distinctive slices: habit/procedural memory and cognitive/ semantic memory. The genetic memory may be the field of knowledge available to savants, and to us, perhaps as Carl Jung’s “collective unconscious,” which included all the collective knowledge and wisdom of the past. More modern quantum physics calls it the Zero Point Field, a ground source state of the Universe, a vast storehouse of all information past, present, and future.

Collective, genetic memory is the memory of something that we should all share and be able to access. Perhaps this is the locale of the skills so-called psychics and intuitives tap into to tell us about things they should not be able to know. Maybe this is where new ideas bubble up from, and that this memory is our “factory installed software.” Consider this intriguing quote from Michael Gazzaniga in “The Mind’s Past”: “The baby does not learn trigonometry, but knows it; does not learn how to distinguish figure from ground, but knows it; does not need to learn, but knows, when one object with mass hits another it will move the object.…”

Gazzaniga describes the brain as being built under “tight genetic control,” and that the vast cerebral cortex is filled with specialized systems that are

ready and waiting to be utilized at any time for specific tasks. Our brains, upon construction, begin to “know” based upon the factory installed software they come with! “And the brain comes loaded,” Gazzaniga says. It seems that our brains are loaded with more apps than any iPhone or laptop could aspire to! And hopefully, the core operating system of our wetware is not running a version of Microsoft Windows!

If indeed this genetic memory is responsible for the transmission of complex knowledge to those who otherwise should not have access to it, then, because we are all human beings, by proxy, we should all then have access to it. But just as we load up a computer with software, adding onto what is already factory-installed, it is up to the individual to find the mechanisms to actually use that software. Not all of us are tech-savvy! The idea that head injuries often accompany the acquisition of savant skills suggests our brains, having been altered by the injury, may unleash the hidden potential.

Still, one would hope that it does not always require getting hit in the noggin with a baseball bat to uncover the knowledge that, many believe, is available to us all—if only we remember.

Chapter 4

DO YOU SEE WHAT I SEE?

The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.

—Albert Einstein

Some minds remain open long enough for the truth not only to enter but to pass on through by way of a ready exit without pausing anywhere along the route.

—Elizabeth Kenny

The mind is its own place, and in itself, can make heaven of Hell, and a hell of Heaven.

—John Milton

To explore most of the mysteries of the mind would require dedicating years of time to read the dozens of scientific journals, books, and papers written in the last several years. In the interest of time (and your sanity) we will attempt to condense and examine the most recent research and understanding of the mind. What is it? Is it part of or separate from the brain? How does it work? Is the mind separate from our consciousness? Do animals possess a mind? Are politicians truly capable of rational thought? Okay, the exploration of that last question may be outside of the scope of our abilities.

Surprisingly, there is still much debate as to whether the mind exists at all. Some argue that the brain is everything, and the illusion of a separate “mind” operating outside the constructs of the brain is, well, just that: illusion. Having begun thousands of years ago, this debate is not a new one, and we are still no closer to a consensus today! We don’t have the time or word count

here to expound upon the entire history of dualism, so we shall focus our efforts on the major progression from the origins of dualistic thought concerning mind/body and mind/brain to where we stand today.

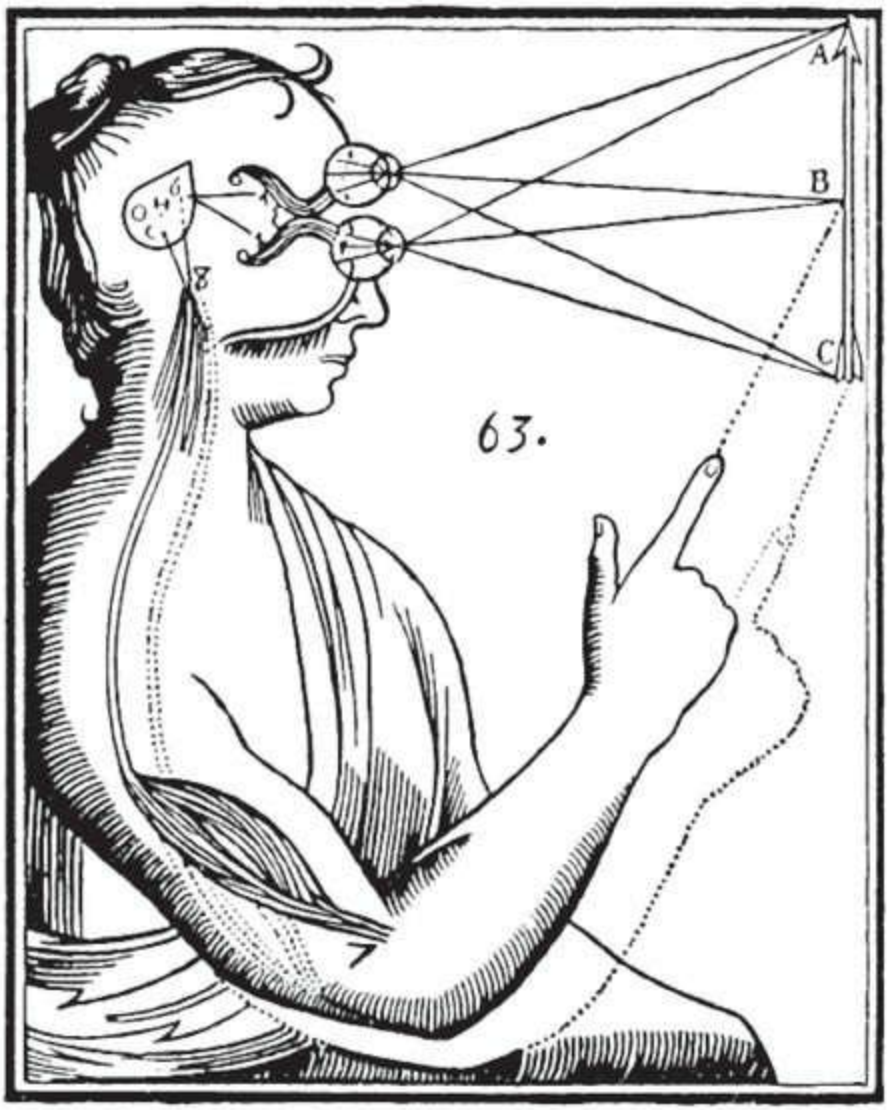
Dualism

According to the Stanford Encyclopedia of Philosophy:

> **I**n the philosophy of mind, dualism is the theory that the mental and the physical—or mind and body or mind and brain—are, in some sense, radically different kinds of thing. Because common sense tells us that there are physical bodies, and because there is intellectual pressure towards producing a unified view of the world, one could say that materialist monism is the "default option." Discussion about dualism, therefore, tends to start from the assumption of the reality of the physical world, and then to consider arguments for why the mind cannot be treated as simply part of that world.

Much of the dualism argument surrounding the mind and brain/body is credited to the likes of such luminaries as Plato and Aristotle, both of whom speculated in their own way that there was a distinct separation between a person's intelligence, which was a faculty of the mind or soul, and a one's corporeal, earthly body. Though they disagreed on content, the end result was the same. Both men believed that the intellect could not be a part of the physical body itself. Aristotle specifically believed that intellect was not something material, thus not a material "organ" in the body—hence, immaterial.

Figure 4.1 *Rene Descartes. Some say he thought too much. Image courtesy of Wikimedia.*



“Property dualism” takes this one step further, suggesting that when matter is organized in a specific manner, it gives rise to mental properties. The mental properties can either be subjective (exclusively non-material) or objective (causally reducible to the physical or material). This concept posits that consciousness can be reduced to nothing but the workings of physics and neurobiology. Imagine how simple life would be! There are several other forms of dualism that play a role in the most modern concepts that we know of today; however, we must focus on the basics of physicalism: the idea that all mental states can be causally reduced to physical states, or vice versa, and dualism itself suggesting some separation between physicality and subjective

mind.

To truly understand the origins of dualism, one must examine not only philosophy, but religious tenets and belief systems. From Zoroastranism to Christianity, and, in fact, throughout nearly all world religions, debate regarding mind and body separation exists. Christianity eventually even embraced the concept of a Trinitarian notion of form consisting of body, mind, and soul in the form of the Father, the Son, and the Holy Spirit. Thomas Aquinas contributed to the argument that the soul or intellect is what defined an individual, as well as the mechanisms responsible for what "made a person a person," the essence of who that person is. Furthermore, Aquinas believed that the soul alone could exist independently of the body. After death, all that would remain would be soul. Although the physical body would end at the moment of death, one's "soul" or individualism would linger on—perhaps, as many paranormal investigators believe, in the form of ghosts, spirits, or "intelligent" hauntings?

Is it possible that the mind must be linked to soul? What of the greater essence of who we are as human beings? If this is getting confusing, imagine now throwing consciousness into the mix. Is consciousness mind or soul? Does it, too, continue on after bodily death? Causal interaction suggests that consciousness and mind can only be considered as separate from the physical body if one can explain how physical memories are created that concern consciousness.

Ideally, dualism would explain exactly how the conscious mind affects the physical realm, but does it? This question is still being debated as we try to "prove" that there is indeed evidence of the immaterial affecting the material, and how this takes place. Where does this interaction take place? How does something seemingly without physical properties have physical effects? These interactions, if they do exist, would violate known laws of physics, especially that big 500-pound elephant: the law of conservation of energy. And we know how upset physicists can get when their precious laws are violated. Be that as it may, however, there may be, as we refer to them, some possible "shortcuts" or "workarounds" around these fundamental laws of science.

What if the mind can somehow influence the distribution of energy without

altering its quantity? This would protect the precious tenets of the law of conservation of energy. And, according to “causal over determination,” what if some of the particular features of a specific effect are not fully explained by the sufficient cause? One feature of a particular effect can be explained, yet others not. This would suggest a significant modification of causal relations in our physical world. Scientists generally don’t like to ponder this possibility much, and, in fact, have nicknamed it the “oh crap, nothing is right!” explanation. Oh, and there is a third argument in favor: dark energy. These interactions may involve some type of currently unidentified type of matter, energy, or process that science has yet to clearly define other than giving it a fairly ominous name.

Still, we cannot help but wonder why people who suffer from brain damage often suffer in mental capacity. Destroying parts of the brain in lab monkeys does indeed lead to compromised mental states, suggesting that there is a causal relation between brain damage and mental deterioration.

The Mind

We must now jump forward to where we stand today within the context of our understanding of body, brain, mind, and consciousness. All of the arguments of the past, and again there are too many to delve into here, quickly take a backseat to the astonishing modern discoveries concerning the brain, as well as the functional roles of various brain parts. The game has changed, and is still changing; even as we write this, some new concept outlining the difference between the physical and the mental will be introduced, thus turning everything again on its head. But, so is the nature of science.

If you remember from our previous two books, we spoke of Ockham’s Razor (entia non sunt multiplicanda praeter necessitate). William of Ockham’s adage is just as fitting here, and would suggest that the simplest explanation is that mind and brain are the same things. This seems particularly accurate, because we are born with both intact, and one does not

get “added on” later in our development. In fact, the Identity Theory of Mind states that the processes and states of the mind are identical to those of the brain. But is it? Is the simplest explanation truly the correct one?

Today’s mind-body dualism persists around the most recent discoveries in how the brain works, yet even the most cutting-edge brain research ultimately seems to only lead to more questions. Even if we do discover the specific part of the brain that causes a particular effect, we still don’t know what causes the effect. Questions, questions, and more questions!

We all have a private world within made up of our thoughts, experiences, feelings, and perceptions, many of which differ from other human beings. If mind and brain were exactly the same (and keep in mind that our brains are basically all the same), then it is this subjective world that would constitute the world of mind that differentiates us from any other living thing. It is almost as if we have two parts to us: the outer functioning body that works both voluntarily and involuntarily, and the inner world where we actually, really “live.”

In other words, there is the “thinker” with all of our brain processes and interactions, and the one who is doing the “thinking,” driving the direction of our thought based upon what we are feeling or experiencing. “Cogito ergo sum,” as Descartes once said. “I think, therefore I am,” or “I am thinking, therefore I exist.” Who is doing the thinking? Who is wondering if they exist? The body, brain, or the mind?

Is personality mind? There is a lot of close connection between the actual physical states of the brain and our mental experience. To attempt to determine the level of autonomy of the mind we must first take free will into consideration. Free will is not a brain process, but a conscious choice based upon personality preferences. Perhaps the mind is simply an autonomous function of the brain, yet still remains dependent upon it. The brain may be the receiver and transceiver of information, yet the mind may act as the interpreter of that information. One is no good without the other, and perhaps consciousness requires both in order for awareness of self to arise. We learn, react, and behave according to the interpretation of information that is flowing continuously. Information flows into the brain of comatose patients, yet unless they can interpret and use that information, they could be said to be

without mental capacity. Then again, they are still, in some way, conscious.

Thus, the dilemma. Remember: We still don't entirely understand how the brain works. If the mind and consciousness both reside in the brain, perhaps we have yet to find out exactly where and how. Yet if they somehow reside "outside" of the brain, no amount of brain research will ever tell us where they come from, only how they interact with the brain to create experience and reality. Thus, we won't know the cause, but only the effects. Duality at its finest!

Those opposed to such dualism will claim that the brain has approximately 1,000,000,000,000 individual neurons on average. Therefore, would it not be possible that some of those neurons, firing together, might create mind and conscious awareness? Choice may simply be a particular pattern of neuronal activity, which we have yet to map out. Maybe the best way to distinguish whether we have a mind is to take a look at the mental processes of animals and compare notes.

In a September 2009 article for *Scientific American* titled "The Mind," Marc Hauser, professor of psychology and human evolutionary biology at Harvard University, takes a look at the key ingredients of the human mind that differentiate us from other species. Charles Darwin once proposed that there was a "continuity of mind" between humans and animals; however, new evidence shows a growing gap between the mental and cognitive processes of humans and those of other creatures. Hauser begins with a fictional and quite humorous tale of extraterrestrials coming to earth and observing the status of intelligent life. They determine that humans are in a group above and beyond the other living organisms because of the increased capacity to exchange and utilize information.

Even though our brains may be similar in form and chemical composition, it seems humans have far surpassed other living creatures in creating new expressions and contemplating them as well. Hauser uses this example: "Not only have bees and baboons never made a soufflé, they have never even contemplated the possibility." (Although we might argue that bees do make honey, and that it tastes mighty good, too!) Humans not only make soufflés, but fine art, weapons of mass destruction, gourmet meals, musical theater, laws, religions, and a whole host of other things it would appear that our

fellow creatures lack the creativity and brainpower to create.

Hauser points out that researchers have found some of the basic building blocks of human cognition in other species, but he suggests four “key ingredients” that make up the human mind. These traits are not found in other animas and are instrumental in helping determine the origin of the human mind.

1. **GENERATIVE COMPUTATION**—Enables humans to create an endless amount of words, things, and concepts. Two types of operation are at work: recursive and combinatorial. Recursion is the repeated use of a rule to create new expressions. Combinatorial mixes discrete elements to create new ideas.
2. **PROMISCUOUS COMBINATION OF IDEAS**—Allows the mixing of different areas of knowledge such as art, sex, space, causality, and relationship, to generate laws, social relationships, and technology.
3. **MENTAL SYMBOLS**—The encoding of sensory experience (real or imagined) to form the basis of a complex communication system. Symbols can be expressed in words or images.
4. **ABSTRACT THOUGHT**—The contemplation of things beyond our five senses.

These four elements set our minds apart from those of “lesser creatures” and make us distinctly human. According to known archeological finds, the human mind may have taken shape during the Paleolithic era from sometime around 800,000 years ago, up to approximately 50,000 years ago. During this time, the human mind may have developed these four ingredients that Hauser believes give us our “humaniqueness.”

Though lesser animals do display sophisticated behaviors that involve cognition and apparent thought, and though humans have brains that are similar to other animals in structure and form, it is the relative size of the cortex regions, and how these regions connect, that, according to Hauser, “give rise to thoughts having no analogue elsewhere in the animal kingdom.” In other words, it is what makes us unique.

Although we may possess intelligence that is far more complex than any

other species, are we truly utilizing our minds to their fullest capabilities? Amazingly, the capacity to learn and create new ideas might be infinite as our minds evolve and expand. Yet the claim that we alone have sophisticated cognitive abilities may soon be usurped by new research showing that other creatures are capable of "metacognition."

A September 2009 issue of *ScienceDaily* features a story titled "Evidence Points to Conscious 'Metacognition' in Some Nonhuman Animals," and documents the work of J. David Smith, a comparative psychologist at the University of Buffalo. Smith conducted studies in animal cognition and found growing evidence that some animals "share functional parallels with human conscious metacognition." In other words, these animals might have the ability to reflect upon, monitor, and regulate their states of mind. (Larry's note: Amazing! I knew it! If you have ever seen some of the facial expressions that Dodo, my miniature shorthaired dachshund makes, then you too would be convinced that this is possible!)

According to the story, the research experiments included a dolphin, pigeons, rats, monkeys, and apes, and investigated perception, memory, and food concealment paradigms. The findings prompted Smith to report that both dolphins and macaque monkeys showed abilities associated with conscious self-awareness and cognition. Pigeons, it appeared, did not. Smith sees this raising important questions about "the emergence of reflective or extended mind in the primate order," and continued by stating that research of this type can open windows on not just reflective minds in animals, but also may point out the antecedents of human consciousness. This would be a fairly significant realization, as proof of metacognition in animals would establish that it is not only humans who possess certain cognitive capacities, consciousness, and self-awareness. Perhaps the emotive response might simply be a function of rote consciousness. Furthermore, is it possible that the emotive responses, which both humans and animals seem to share, may only be a learned mimic?

Back in the human realm, the search continues to identify what role the brain really plays in the subjective world of mind, and throughout consciousness itself. Many experts in the neurology and brain sciences fields are more inclined to ascribe it all to the brain. The more philosophical crowd

may be more inclined to see distinctions. Still, others are absolutely certain there is a distinct separation that exists, based upon their more "outside the box" research into such areas as near-death experiences (NDEs).

Professor Peter Fenwick is a leading authority into NDEs and points to his research into these enigmatic experiences as prevailing evidence of a separation between mind and brain. His argument centers upon reports from all over the world of people who are literally "dead," and thus have no brain stem reflexes, breathing, cardiac output, or consciousness, yet somehow experience visions of what death and the afterlife is like. These reports share many common themes and imagery, and according to Professor Fenwick, did NOT occur just before the dying process itself, but during, and possibly, afterward. There are far too many stories with similar details to simply discount the phenomenon as subjective.

Fenwick insists that we rule out transcendent experiences as the cause, because the people are not conscious at the time, and therefore cannot experience any changes in levels of consciousness. He is quoted in *The Psychic Times* as saying "It looks as if what the NDE experiencers are saying is probably correct. Now if that's true then you have to say some very fundamental things about brain and mind." Fenwick calls for proper research into these experiences on a grander scale to truly determine if indeed brain and mind, as the NDEs suggest, are not one and the same.

Fenwick's ideas are supported throughout the metaphysical community where there is less discomfort discussing topics that traditional science cannot yet explain. Psychic investigator Victor J. Zammit suggests that "objective evidence for a separate mind" exists in 23 different areas for the evidence of the afterlife. He discusses these on his Website (*www.victorzammit.com*), and, though they lack real proof in a scientific sense, it suggests that perhaps the mind does keep on tickin' after the brain has taken a fatal lickin'.

Zammit likens the situation to a driver and a car. The mind can be seen as the driver and the brain as the car itself. The mind gives the directions and has the actual experiences of driving along (hopefully without any signs of road rage!). The car just revs up and moves. When the car stops working, the driver can continue on. Although this is neither objective nor empirical

evidence by any means, it certainly does provide an interesting analogy. If we equate mind with consciousness, then there is a bulk of subjective "evidence" to show that the brain is a separate entity, yet one that can be fully engaged in the process of thought and awareness. Do we ignore the subjective and only focus on the objective? Is your brain starting to hurt just thinking about this?

Those immersed in NDE and metaphysical study consider the separation of mind and body critical to their own concepts and beliefs of life after death. (NDE will be discussed in more detail in Chapter 7.) Even tenets of traditional religion and spirituality are formulated around the concept that a part of our being, our essence perhaps, continues on long after the body turns to ash and dust.

But wishful thinking is not valid scientific proof to those who focus on the brain, and the fact remains that there is still so much of the brain we have yet to comprehend. Maybe it is "all in our heads," and we just don't yet realize how vast and expansive our heads really are.

The mind/brain issue continues to be the most contentious area of discussion in modern science and philosophy. With little in the way of resolution in sight, those on both sides of the fence continue to point to their own research and theories as evidence—pro and con. Yet the issue gets even murkier when we consider consciousness.

Is consciousness separate from mind? From the brain? Ultimately, it may all come down to semantics. Trying to determine brain from mind from consciousness may be an exercise in futility. We asked Stanley Krippner, PhD, professor of psychology at Saybrook Graduate School, and a leading pioneer in the field of scientific investigation of human consciousness, about the arguments for and against the mind/consciousness as part of the brain's normal functioning. His answer is most enlightening:

> **T**his simply does not work because there is no consensus agreement on "personality" or "consciousness." In my opinion, BRAIN refers to the bodily organ studied objectively by neurologists and the like. MIND refers to the subjective experiences studied by phenomenologists and the like. David Chalmers said the "hard problem" of the neurosciences is to determine how these subjective

> experiences are linked to the neurological entity. Psychologists study both mind and brain, and so do many other disciplines. I often use the term “mind/ brain” to cover both areas of study. Therefore, “mind” and “brain” are not the same, nor are “heart” and “heartbeat” or “head” and “headache.” The English language consists of over one million words, and using these words carefully can keep students of mind/brain phenomena focused and centered.

Maybe consciousness is nothing more than the simple awareness of being alive, with mind as the creator of the personality with which we express that life, and the brain as the mechanism by which we carry out the “marching orders” of the mind.

Consciousness

Frustrating things further, we lack a true understanding of consciousness. Scientists generalize that consciousness is self-awareness, and that some organisms have it and some don’t. Maybe it is more accurate to say that all organisms that are alive have consciousness, but in a graduated sense. Some have more of it than others, yet all are aware of being alive, of having a self. “Self-consciousness,” on the other hand, is a more intricate involvement of the mind ensconced within the decision-making process that is life. Perhaps some animals are just driven by a more primal consciousness, a survival-based awareness that had no need to be acutely aware of behavior and attitude and belief.

This is why humans are most often associated with the concept of “higher mind,” which is a combination of consciousness in general, and self-consciousness specifically. Or maybe it’s the division of consciousness further into two disparate pieces: the subconscious and unconscious. Perhaps it is those aspects alone that make humans stand out from the rest of the world of living things. These mechanisms of consciousness each may have their own role, and could possibly all be a part of the greater mechanism that is the human brain.

In his article for the Jan/Feb 2008 *New Dawn Magazine*, Bruce Lipton, PhD, looks at "The Power of the Mind" and suggests that the subconscious mind, which he likens to a powerful computer capable of processing massive amounts of information, seems to operate without much input from the self-conscious mind. Its almost as if it has a mind of its own (pun intended). The subconscious can take both direct and indirect sources of information and process them at "extraordinarily high rates of speed." In fact, Lipton cites many cognitive neuroscientists as believing that only a marginal 5 percent of our cognitive ability is courtesy of the self-conscious mind, with the majority of our remaining decisions, emotions, and actions coming from the "unobserved processing of the subconscious mind."

Lipton writes in *The Biology of Belief: Unleashing the Power of Consciousness, Matter and Miracles* about the ongoing conflict between the conscious mind and the subconscious mind, giving much of the power to the subconscious. He states that we all have behavior programs that are stored in the subconscious that only really make themselves visible when our "buttons are pushed," resulting in us flying off into a rage, creating drama, or reacting without thinking. All the positive thinking in the world cannot overcome the negative programming of the subconscious mind, which is probably why so many people who bought *The Secret* were ultimately disappointed with the law of attraction. Yes, it works, but first you have to clean out the mess in your subconscious that blocks it from working! As Lipton states, the conscious and subconscious are interdependent. "The conscious mind is the creative one, the one that can conjure up 'positive thoughts.' In contrast, the subconscious mind is a repository of stimulus-response tapes derived from instincts and learned experiences."

The subconscious may be our mind on autopilot, with the conscious mind our manual control. Conceivably, this could explain why you can get in your car and sort of zone out and still end up at the local Wal-Mart. Luckily, your subconscious GPS had it programmed and your conscious mind was not needed, except maybe to find a parking spot close enough to the entrance to not require hiking gear. I (Larry) have had this experience more times than I care to admit when driving home, physically and mentally exhausted after a late-night ARPAST investigation. I have absolutely no recall about the often lengthy trip, yet somehow still end up safely in the comfort of my own bed.

Although the parts of consciousness all work together as a whole, we really don't understand them enough to determine their origins. Modern neuroscience has yet to trigger the mechanisms by which the brain generates consciousness, if indeed it is responsible for doing so. Most recent studies suggest that consciousness is more of a highly complex framework or system than just a single or simple construct of a particular part of the brain. Unlike experiments where the cerebral cortex, amygdala, or hippocampus is stimulated to create a specific behavior, triggering parts of the brain seem to play only a small role in "creating conscious awareness."

In the October 2007 issue of *Scientific American*, in an article entitled "How Does Consciousness Happen?" two leading neuroscientists attempted to explain consciousness, disagreeing on the activity that takes place in the brain during a subjective experience. Christof Koch, professor of cognitive and behavioral biology at CalTech, and Susan Greenfield, professor of pharmacology at the University of Oxford, both see differences in how consciousness works on a neuronal level. Based upon his research Koch suggests that "specific groups of neurons mediate distinct conscious experience." Greenfield suggests instead that "consciousness is generated by a quantitative increase in the holistic functioning of the brain." Both seek to one day find the "most appropriate neuronal correlates of consciousness." If they are able to find this, we may then understand the direct cause and effect mechanism for creating consciousness as a result.

The battle is ongoing, with new research asking when the origin of consciousness arises in a human life, and how it evolves through time. Infants in the womb may indeed be conscious on some level, yet in a sort of suspended state until the moment they are born and brought out into the light of personal existence and experience. A new theory of consciousness, courtesy of psychiatrist and neuroscientist Guilio Tononi of the University of Wisconsin at Madison now posits that perhaps it works similar to Information Theory (IT). Tononi believes that, similar to IT, everything comes down to information, and it may be that our subjective states come from the expression of that information by the brain. Information is rampant in our consciousness; we are constantly bombarded with it as we go about our normal day-to-day activities. Information is also highly integrated and indexed, which provides reference or meaning to certain images and not

others. That meaning comes from the subjective experience of the information itself. You may see an image of a lizard on the wall and think nothing of it, but an image of your child creates neural connections that lead to feelings of love and pride. Maybe it all comes down to information, and how we process it in a variety of highly differentiated states of consciousness.

The thing is we know we have consciousness. And we cannot possibly know for sure if any other living thing does or does not, because we are not having their experience, living in their bodies. The other problem is that there seems to be all these different *levels of consciousness*. And each seems to have its own set of rules and behaviors. Hypnosis, long thought of as a "sleeplike state," is possibly a distinct state of consciousness in which the subject is aware and awake (although not fully awake). This has been confirmed by a host of tests involving electroencephalographic studies (EEG) on hypnosis patients. Research is actively being conducted in this area. One new survey by psychologist Joseph Green of Ohio State University, along with many of his colleagues, posits that hypnosis is a "distinctly altered state of consciousness." The January 2009 issue of *Scientific American Mind* describes this finding as an issue of great importance. Why? Because if hypnosis implies a type of consciousness that differs in kind (but not degree) from ordinary consciousness, then it is possible that people under hypnosis can take actions often impossible to perform in the normal waking state. Furthermore, it also implies that hypnosis can be a valid method of pain reduction and behavioral control.

More importantly for our work here in this book, it suggests that "providing highly suggestible people with sufficient incentives to perform them" can generate these effects. This one statement alone is of critical importance when we look at such broad subject as collective thought, religion, belief, and tradition.

Can consciousness be spread? Is it contagious? How do things such as trends, memes, paradigms, groupthink, hysteria, and mass perception work? Is there a specific part of the brain that governs "types" of consciousness that are exactly the same in all human beings, or at least in groups of them?

Personal perception and belief arises from the collective objective and subjective experiences and the meaning ascribed to them. We are all a bit

different in how we perceive, process, and act upon both external and internal stimuli that result in a world rich with ideas and variety. Could you imagine how boring life would be if everyone thought and acted similarly?

Indeed, one of the most intriguing concepts is recognizing and understanding the collective perceptions and beliefs across vastly diverse groups of people. Can you make someone see something that is not there? Can a group of people be infected with a thought, an idea, or a perception?

We have all heard the old axiom that “great minds think alike” (and Marie and Larry can certainly attest to that!), but do they do so because of similarities in the brain or perhaps because of a collective field or external framework that we can somehow access and draw from to create our conscious reality? One need only look on social networking sites such as Facebook, Twitter, and even Google and Yahoo searches to see what the “thought streams” of millions of people are. The use of keywords and the number of times they show up in Internet search phrases is of growing interest to both sociologists looking for future trends in thought and behavior, and any number of companies and corporations eager to tap into the next big trend—and your pocketbooks. Even governments and military agencies are paying attention to the patterns that are emerging from the collective thought stream of the Internet universe.

Twitter even acts as a real-time search engine of memes, trends, collective concepts, tipping points, and paradigms all wrapped up in non-stop, “as it happens” conversations between people all throughout the world, and all in 140 characters or less! For anyone wishing to know what the mind of humanity is thinking, Twitter may be the closest thing we have to making that a reality. With this kind of network linking people across the world in a real-time format, it is reasonable to suggest that if we all have the same thought at the same time, at least we Twitter or Facebook about it. But in reality, there may be more to shared or contagious thought and perception than meets, well, the eye and the brain. (Larry’s note: While this glut of information may seem to be ideal for those “information addicts,” for some folks like me these sites also represent a potential for information overload. Who really cares that you are stuck at a stoplight [you shouldn’t be texting anyway], or that you just drove through Starbucks for the latest double vente

latte whatchamaccino? Whew! Okay, now that I got that out of my system, let's move on.)

Groupthink

Let's start with the bad news: the negative side to mass perception and contagious thought. There may be nothing at all anomalous or mysterious about humans who think and act in groups. It's sometimes easier to adopt an existing mindset than come up with one totally unique and maverick. Social psychologist Irving Janis coined the term *groupthink* to describe such behavior. Groupthink occurs when a group of people who consider themselves members of a specific "group" based upon perhaps race, gender, belief, or status, try to reach consensus decisions without first analyzing or critically examining their choices for doing so. In groupthink, there is no such thing as individuality or independent thinking. The pressure of thinking as a group often leads to negative aspects such as lapses in mental efficiency, perceiving and testing reality, and moral judgment.

Janis defined groupthink in his book *Victims of Groupthink* as "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' striving for unanimity override their motivation to realistically appraise alternative courses of action." This drive to insulate group thought from outside interference or opinion can often end up dehumanizing other groups. This is where we get racism, sexism, ageism, and any other "-ism" adopted by groups that display these eight symptoms of groupthink:

1. Illusion of vulnerability and excessive optimism leading to extreme risk-taking.
2. Collective rationalizing and lack of examining assumptions.
3. Belief in rightness and morality of cause to the detriment of opponents.
4. Stereotyping of other groups.
5. Direct pressure on dissenters and punishing independent thinkers.
6. Self-censoring and refusal to express deviations from group consensus.

7. Illusion of unanimity and assumption of majority view as unanimous.
8. Self-appointed members who protect the group and leader from outside information that could contradict groupthink.

What is so inherently frightening about groupthink is that it not only creates the inequalities and injustices of the world, but also often can occur to the extreme, such as in the case of cults.

Janis includes many historical events as evidence of groupthink, including the Bay of Pigs invasion, the Vietnam War escalation, and the failure to anticipate the Pearl Harbor attack. Remember the Heaven's Gate cult? In 1997, police discovered that 39 members had all committed suicide at the behest of their leader, Marshall Applewhite. When taken even further, groupthink led to more than 900 people "mindlessly" killing themselves and their children at the whim of a man named Jim Jones. Was groupthink also partially responsible for the subservient behavior of those who mindlessly followed one of the biggest madmen of history—Adolph Hitler?

However, not all membership in groups is bad, but when individual thought and independent decision-making are trumped by the will of the "whole," especially if the whole is sick or dysfunctional, we end up with things such as mob rule, herd mentality, and mass hysteria.

Herd Behavior

Whether it is known as flocking, hive mind, moral panic, sheeple, swarm intelligence, or just plain conformism, herd mentality is the result of groups of people behaving and acting in one manner without any planned direction or thought beforehand. It is instinctual, perhaps from our primitive survival option to stick together in a large group when threatened by an outside danger. Although animals instinctively display this behavior, surprisingly, humans likewise do to an extent, despite no longer being out in the open and needing to act as a unit against perceived harm.

Evolutionary biologist W.D. Hamilton wrote in his article "Geometry for the Selfish Herd" for the 1971 *Journal of Theoretical Biology* that in a group of animals fleeing a predator, each individual animal reduces the danger to

itself by keeping as close as possible to the center of the group. This allows the group or herd to move as a unit in appearance, even if “its function emerges from the uncoordinated behavior of self-serving individuals.”

Escaping a predator is not always the sole cause of herd behavior. When a large group of people who support a cause get together, there can be violence and riots. Sporting events often erupt in herd behavior, and natural disasters frequently result in looting and crowd behavior that is not ordinarily experienced. It’s almost as if the disaster gave permission for the breakdown of social order, morality, and even independent critical thinking that might lead to proper decisions regarding right and wrong.

Add the element of fear to the mix, and you have panic in the form of mass hysteria. The 1692 Salem, Massachusetts, witch hunts are a perfect example of contagious thought that turned deadly, resulting in the accusations, damnation, and execution of possibly millions of young and old women and their supporters, all due to the strange behavior that was displayed by four children falsely perceived to be the result of witchcraft performed upon them by an Irish washer-woman. Without the intervention of objective and calm counter sources, mass hysteria can take off and result in terrifying waves of negative behavior.

Mass Sociogenic Illness

One type of mass hysteria we see today is Mass Sociogenic Illness. This takes the form of a wave of reported illnesses due to perhaps just one account of such illness. For example, your child comes home from school with flu-like symptoms. Suddenly, you suspect it is Swine Flu and tell another parent, and the next day their child and dozens of others are out of school with this “deadly new disease.” Perhaps they do have Swine Flu, but more than likely they do not, suffering instead from a minor illness amplified in importance by news-driven fear and paranoia.

This exact scenario occurred in 1992 at a summer program in Florida for disadvantaged children. One day at lunch, 150 children sat in the dining hall

eating when one girl reported not feeling well. She vomited and soon others who ate the same pre-packaged meals provided at the camp began displaying the same symptoms of nausea and vomiting, which they blamed on the food. The program supervisor added fuel to the fire by announcing that the packaged lunches might have be poisoned, resulting in 63 sick kids. Three different area hospitals took in the sick kids.

Guess what? When examinations and tests on the children turned up nothing, the whole ordeal ended just as abruptly as it began. The meals were analyzed and found to be perfectly fine. Oh, and none of the kids at the 68 other places where the same pre-packaged meals were eaten got sick.

Mass Hysteria

Although we may giggle at such an example, it doesn't always turn out so well. Throughout the last several decades, mass hysteria has taken the form of everything from a laughing epidemic in Kashasha, Africa, to the firm belief of millions of radio listeners that Earth was being invaded by Martians. Who hasn't heard of the infamous broadcast of H.G. Wells's classic science-fiction novel *War of the Worlds* broadcast on October 30, 1938, by the late, great Orson Welles? What started out as a simple Halloween treat for listeners of the radio drama anthology series *Mercury Theatre on the Air* turned into a mass panic that embraced fictional news accounts as all too real. The end result made history as crowds gathered in the Grover's Mill area mentioned in the broadcast, and police were dispatched to control the growing masses. Some people even reported seeing lightning in the distance and smelling toxic gases from the alleged craft where Wells claimed the martian ship went down.

The mass panic spread all throughout the country, but there was no foundation for it other than a story broadcast at a spooky time of year. No wonder people today are heading toward the hills as we fast approach the year 2012, when some allege that the world will end courtesy of supposed predictions of the Mayan Long Count Calendar.

Perhaps one of the most amusing examples of mass hysteria and panic,

though, involves what most men might claim as their main claim to fame. In 1967 in Singapore, a panic broke out in which thousands of men believed that their penises were shrinking and disappearing. Penis panic, that is. Some of the stricken even resorted to self-injury as they tried to lengthen their shrinking appendages with fish hooks (Wow! That had to hurt!), shoe strings, and needles.

Only a massive campaign on behalf of the government and media finally calmed the crazy masses and assured them that their beloved penises were just fine and dandy. No Viagra, fish hooks, or magnifying glasses needed.

In July 1518, in Strasbourg, France, a dancing plague broke out when a woman named Frau Troffea began to dance her heart out in the street. She did this for up to six days, and was soon joined by dozens of others. Eventually, 400 dancers joined her little epidemic, resulting in several deaths due to heart attack, stroke, and exhaustion. In our exhaustive research, we have discovered this to be the inspiration for the popular television show *Dancing with the Stars*. Okay, not really, but it makes you wonder!

People will believe anything, no matter how ridiculous, stupid, or downright dangerous to their health it might be, especially if someone else believes it first.

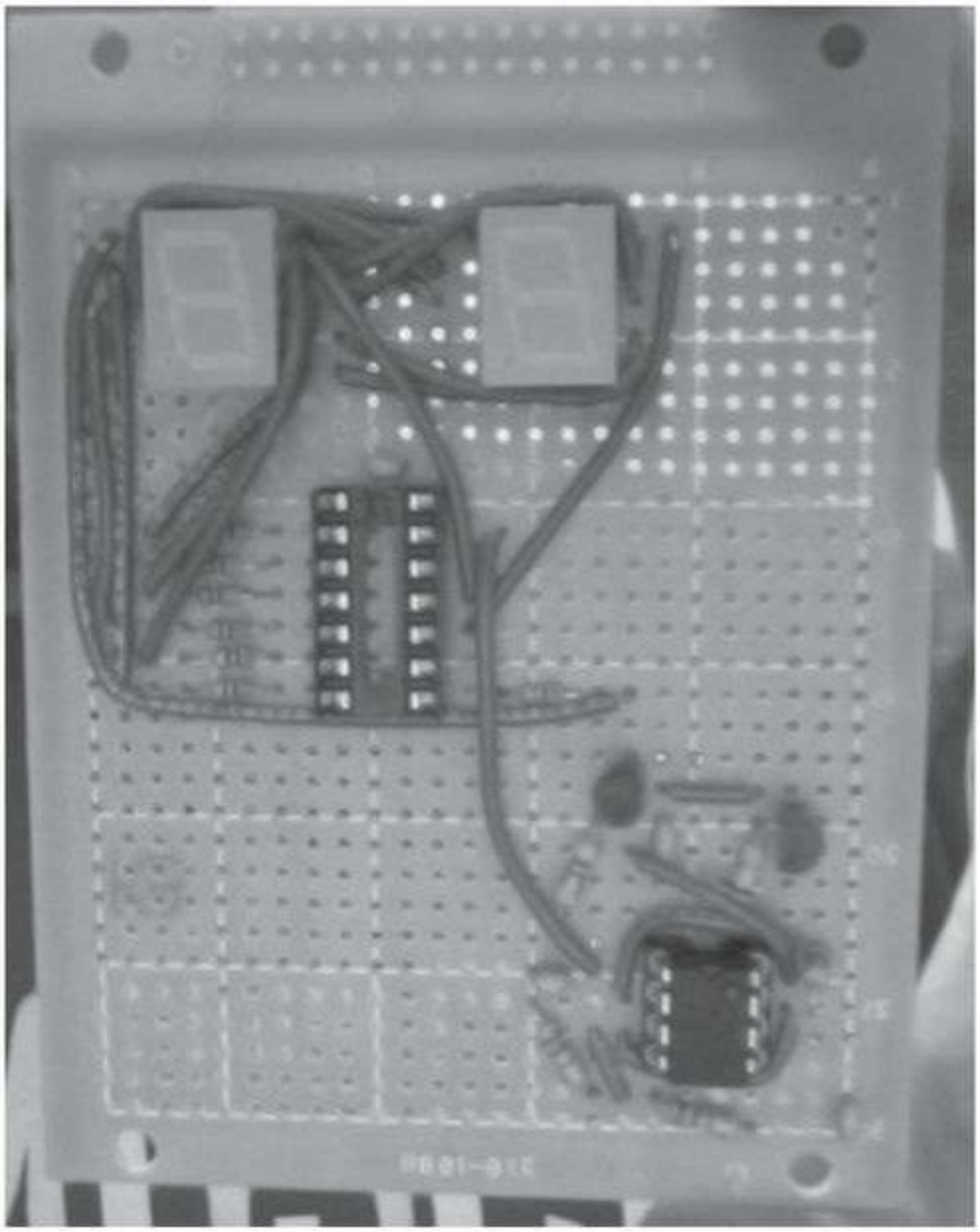
There is a what-comes-first element to mass belief, though, that brings back the old chicken and egg argument. Is it the thought that infects each mind on an individual level until collective consensus is accepted? Or is there a pre-existing collective part of the brain, or maybe of consciousness, that accepts and experiences an idea or concept at *the very same time* thousands, or millions, of others do as well? Are we somehow genetically programmed to think and act alike under certain trigger circumstances? Or are we all tapping into the very same informational field at once?

PEAR

These questions have been pondered and experimented with in some striking ways. We have written in the past about the amazing research conducted at the Princeton Engineering Anomalies Research Lab (PEAR)

involving random event generators (REGs) that seem to indicate mass intention on a precognitive level. PEAR has now given way to numerous new studies of mass consciousness, including the Global Consciousness Project and the International Consciousness Research Laboratories, a consortium of more than 75 members working to extend the work of PEAR into a broader framework encompassing the understanding of reality, consciousness, and perception. PEAR has also incorporated the works of an organization called Psyleron, which provides the technology necessary to continue the work that originated at PEAR in an effort to determine the role consciousness plays in establishing physical reality. I (Larry) am quite excited that I will be one of the actual hosts of a Global Consciousness Project EGG, one of approximately 120 around the world. I will get to observe real-time data from the RNG and participate in ongoing research into the work of GNC, which we will definitely write about in the future.

Figure 4.2 *Custom-designed random number generator owned by Larry Flaxman and ARPAST. Image courtesy of Larry Flaxman.*



The individual mind is anomalous in many ways, but collectively, millions of minds having the same thought or thought reaction, often of an event before it actually occurs, suggests a mechanism beyond just a few great minds thinking alike. These bold new research organizations seek to find the origins of mass perception, shared consciousness, shared intention, and even the power of mass intention to create manifest reality. Luckily, many of those involved in these studies of consciousness-related phenomena come from the

scientific community, lending credence to ideas, theories, and concepts once thought to be strictly within the realm of metaphysics.

Though PEAR's 27-year-long research focused on the domain of human/machine interaction, measuring the effects of thought and consciousness on black boxes that produced otherwise random data, some of the most cutting-edge research into collective consciousness comes from the world of intention studies. If there is a consciousness field effect, as the PEAR studies suggested, then author and researcher Lynne McTaggart might find it with her Intention Experiment. Described as the "world's largest mind-over-matter experiments," McTaggart, author of *The Field: The Quest for the Secret Force in the Universe* and *The Intention Experiment*, works with major research organizations such as the International Institute of Biophysics and the Institute of Noetic Sciences (IONS), as well as major universities such as Princeton and Cambridge. The goal of her global experiments, which are scientifically controlled and Web-based (*www.theintentionexperiment. com*), is to determine if the power of intention, or focused thought, can change the world. She utilizes thousands of volunteers to engage in collective intention. In the pilot experiment, McTaggart asked a group of 16 meditators in London, England, to focus their thoughts on four remote targets in a German laboratory. The targets were two types of algae: a plant and a human volunteer. The meditators were asked to lower specific and measurable biodynamic processes, and the results were significant changes to all four targets during the time the meditators "sent" their intentions.

Dan Brown, the hugely popular author of *The Da Vinci Code*, featured this work and the work of IONS in his massively successful novel *The Lost Symbol*, thereby catapulting public interest in intention and consciousness into the stratosphere (not to mention helping sales of McTaggart's books and membership in IONS!).

As Brown states in his novel, the concept of "a highly ordered energy capable of changing the physical world," drives the author's story and the work of his main character, Katherine Solomon. Although the book is fiction, the concept and the research are real and ongoing.

In Richard Brodie's *Virus of the Mind*, the author looks at the study of memes and how they "infect" the minds of the masses through time. A meme

is simply “a unit of information in a mind whose existence influences such events that more copies of itself get created in other minds.” Memes lead to trends and tipping points, critical mass, and consensus of public opinion. Brodie calls them “mind viruses” and suggests they can be both positive and destructive, depending on their intent and content. With today’s technology making it easier and easier to connect with others on a global scale, viruses of the mind will no doubt increase just as viral videos on the Internet are on the rise.

Some people fear that viruses of the mind can infect enough people to cause a “mental plague” that can result in the destruction of humanity. Although we would hope enough minds would resist this kind of impervious infection, history shows how easily the thought of one mind (again, Hitler comes to mind) can infect millions of minds and result in millions of deaths. Brodie remarks that conspiracy theories are cultural viruses that “can spread in a way that looks just like a conspiracy without any conscious intention on the part of the participants.” He goes on to say that all but the most interesting conspiracies are easy to keep secret, because “news about them won’t spread if it doesn’t have good memes.”

Memes

With the internet and global communication at the tip of our fingers, memes spread more rapidly than any physical pandemic. Once that critical mass in the public is reached, a meme can become a widely accepted “fact of life” that is hard to dismantle once it has been put into place. Yet Brodie states that by consciously spreading important ideas yourself, you can combat the mind viruses that constantly bombard your unsuspecting brain. Most of us go through life blindly absorbing the infections of other people’s thoughts and ideas, and then wonder why we are sick on so many levels. Mind viruses have the power to distract us, control us, and even create our perception. If a meme is widespread and powerful enough, it could even make a whole group of individuals believe that blue is green and green is blue.

Most of this mind virus programming, though, occurs on a purely subconscious level, again making it very hard to combat or detect. But Brodie

believes knowledge is power to “disinfect,” and when we look at those who leave cults and have to be “deprogrammed” back into normalcy, often throughout a long period of time, we can understand how effective and influential these mind viruses can be.

Whether we consciously or subconsciously buy into concepts, memes, and trends, we cannot escape the constant attempts by our outer environment to group thoughts tidily into categories of conformity. Whether via religious belief, political affiliation, or social status, we often accept mass perception as more important than our own. This is where we can get into some very big trouble as a society. But, as the next chapters will show, it also creates an unusual breeding ground for unknown anomalies that might ordinarily get left out of the picture.

Maybe the best way to look at brain, mind, and consciousness is to think again of a car. The car is the brain. The driver is the mind. And the fuel is consciousness. Nothing works without the other parts, and they all work together to create a moving vehicle going in a particular direction, or no direction at all. Based upon the perceptions of the driver, that direction is determined, and the path is not deviated from without conscious effort on behalf of the driver that turns the car in a different direction. On the freeway, there are billions of cars with billions of drivers using up billions of gallons of fuel. Some are going in the same direction; many are going somewhere specific only to them.

Collective consciousness and mass perception occur when a number of drivers make the same choice to turn their cars down a particular road, or they fail to choose their own path and blindly follow the cars in front of them (think cults and groupthink). Depending upon the perception of the masses, the end result can be a huge traffic jam and a lot of pile-ups, road rage, and accidents, or a smoothly flowing line of cars bringing their drivers to the same desired destination with ease, effortlessness, and joy.

Mahatma Gandhi once said that our beliefs become our thoughts, which then become words, which then become actions, which then become habits, which then become values, which then become destiny. Along this journey, we have the choice to either go along with the crowd or remove our conscious awareness from the pack and make our own destiny. Whether or

not this all occurs in the brain, the mind, the consciousness, or a combination of the three matters nowhere near as much as the understanding that we align all three to work together for our common good. Science longs to understand the roles of each, but for those of us who are not scientists, we can rest assured that no matter where our awareness and thoughts originate, we have the power to change them, and often just by simply changing our perception.

Sometimes, doing so can open up new worlds we never knew existed, or dared not believe in.

Chapter 5

SPOOKED: THIS IS YOUR BRAIN ON GHOSTS

Ghosts, like ladies, never speak till spoke to.

—Richard Harris Barham

Now about those ghosts. I'm sure they're here and I'm not half so alarmed at meeting
up with any of them as I am at having to meet the live nuts I have to see every day.

—Bess Truman

The thing always happens that you really believe in;
and the belief in a thing makes it happen.

—Frank Lloyd Wright

It's a little after three in the morning. I am here with the members of my group, ARPAST, the Arkansas Paranormal and Anomalous Studies Team. We have been on an investigation at a reportedly haunted location since early in the evening. Weeks of research and planning have led up to this night, and now I'm ready for it to be over. Even the cheap, stiff motel bed sounds comforting. Physically and mentally exhausted from long periods of alternating between standing, walking, and sitting, I look back upon my years of field research and wonder how I managed. So, as I sit here counting down the minutes until the last team rotation is complete, I can't help but wonder, why? Why do I keep looking for the proverbial pot of gold at the end of the rainbow? Why is there no solid, definitive evidence? Are we looking in all the wrong places? I know that the vast majority of reported events are easily explained via conventional means. We have been able to show that, what

many consider to be evidence of paranormal activity, we are able to provide a mundane explanation for by utilizing strict scientific method, state-of-the-art technology, and good ole fashioned common sense. Of course, there are tantalizing snippets that are thrown at us from time to time—almost as if to test our dedication and resolution. In all of the years that I have been involved in paranormal research, I can count on exactly four fingers the number of truly unexplainable events which I have witnessed, and which we have been unable to "debunk"—either ourselves or through the process of peer review.

The search for knowledge and truth certainly can lead one down some strange paths. Are we wasting our precious time, energy, and money researching an elusive, intangible mystery? How did the topic of death, dying, and the afterlife become such a central tenet of religion, philosophy, and daily life?

—Larry Flaxman, coauthor

For as long as we have existed as a sentient species, man has had an enduring fascination with our own mortality; however, serious exploration into "life after death" and the paranormal has only been occurring for a little more than 160 years. Since the advent of the Spiritualist Movement in 1848, adherents believed that life existed after physical death of the body, and that the human spirit existed beyond the corporeal body. One of the most noted aspects of the movement was the belief that these spirits could freely communicate with the living. Early efforts at communication involved the use of a "sitter" or "medium," who would often go into a deep trance state in order to facilitate the passage of messages from beyond the veil. There were also practitioners who could produce physical phenomena, which they claimed was the work of "spirits," including "ectoplasm," mysterious lights, unearthly music, levitating objects, disembodied voices, and apparitions.

Séances conducted in dimly lit rooms were considered to be one of the most exciting and productive means of communicating with the spirits of the dead. The psychic mediums often went to great lengths to design the rooms to be conducive to the "mood," and satisfy the expectations of the attendees of entering a place where the spirits of the departed would be welcomed. Generally, the rooms were arranged in such a manner that a number of people

would sit around a large table with the medium at the head. The sessions lasted anywhere from 30 minutes to several hours, and often boasted a variety of spectacular phenomenon such as table raps, objects flying around the room, candles extinguishing and then spontaneously relighting, and other unusual effects.

Certainly, many of these early paranormal investigators had their hearts in the right place; however, the unfortunate darker aspects of human nature quickly came to light. Perhaps not surprisingly, the public hastily turned their attention to this field looking for answers. If there truly was life after death and the Spiritualists had somehow been able to prove it, they wanted to know. As a result, critical investigation began, and the downfall of many of the mediums came swiftly as a result of their public exposure as fakes, frauds, and charlatans. It become apparent that many individuals involved in the field were outright liars with their own agendas—most simply being involved for the easy money and fame.

Regardless of the fact that there were likely some legitimate mediums, the Spiritualist Movement received an indelible and very public black eye. As a result, the Spiritualist Movement basically ended around 1900. However, the public's desire for answers did not. With the advent of World War I, thousands of bereaved folks flocked back to séances, Ouija boards, and mediums with renewed vigor. The Spiritualist Movement enjoyed a brief but torrid second wave. But public interest cooled and, by the 1920s, the era of the physical medium was gone, most likely in large part to the continued attacks by magicians and debunkers who exposed the frauds and even hurt those mediums that might have actually had real abilities. Mediums no longer tried to manifest physical materializations and turned to "mental mediumship" instead.

Again, the public was not satisfied and began to look anew for methods to communicate with their dearly departed loved ones. Moving from mental mediums to technology was the natural progression, especially in light of the great technological advancement that began in the 1920s.

A BRIEF HISTORY OF TECHNOLOGY FOR TALKING TO THE DEAD

1920s: It is not generally known that in the 1920s Thomas Edison tried to invent a machine that would communicate with the dead. Thinking this was possible, he wrote: “If our personality survives, then it is strictly logical or scientific to assume that it retains memory, intellect, other faculties, and knowledge that we acquire on this Earth. Therefore…if we can evolve an instrument so delicate as to be affected by our personality as it survives in the next life, such an instrument, when made available, ought to record something.”

Edison never succeeded with the invention, obviously, but it seems he did believe that it might be possible to capture disembodied voices with a machine.

1930s: In 1939, Attila von Szalay, an American photographer, experimented with a phonograph record cutter in trying to capture spirit voices. It’s said that he achieved some success with this method and got even better results in later years using a wire recorder. In the late 1950s, the results of his experiments were documented in an article for the American Society for Psychical Research.

1940s: In the late 1940s, Marcello Bacci of Grosseto, Italy, claimed to be able to pick up voices of the deceased on a vacuum tube radio.

1950s: In 1952, two Catholic priests, Father Ernetti and Father Gemelli, inadvertently picked up EVP while recording Gregorian chants on a magnetophone. When the wire on the machine kept breaking, Father Gemelli looked to the heavens and asked his dead father for help. To the shock of both men, his father’s voice was heard on the recording saying “Of course I shall help you. I’m

always with you." Further experiments confirmed the phenomenon.

In 1959, Friedrich Juergenson, a Swedish film producer, was recording bird songs. On playback, he could discern his mother's voice saying in German "Friedrich, you are being watched. Friedel, my little Friedel, can you hear me?" His subsequent recording of hundreds of such voices would earn him the title "the Father of EVP." He wrote two books on the subject: *Voices from the Universe* and *Radio Contact with the Dead*.

1960s: Juergenson's work came to the attention of a Latvian psychologist named Dr. Konstantin Raudive. At first skeptical, Raudive began his own experiments in 1967. He too recorded the voice of his deceased mother saying "Kostulit, this is your mother." Kostulit was the boyhood name she always called him. He recorded thousands of EVP voices.

1970s and 1980s: Spiritual researchers George and Jeanette Meek joined forces with psychic William O'Neil and recorded hundreds of hours of EVP recordings using radio oscillators. They allegedly were able to capture conversations with the spirit of Dr. George Jeffries Mueller, a dead university professor and NASA scientist.

1990s to present: EVP continues to be experimented with by a number of individuals, organizations, and ghost research societies.

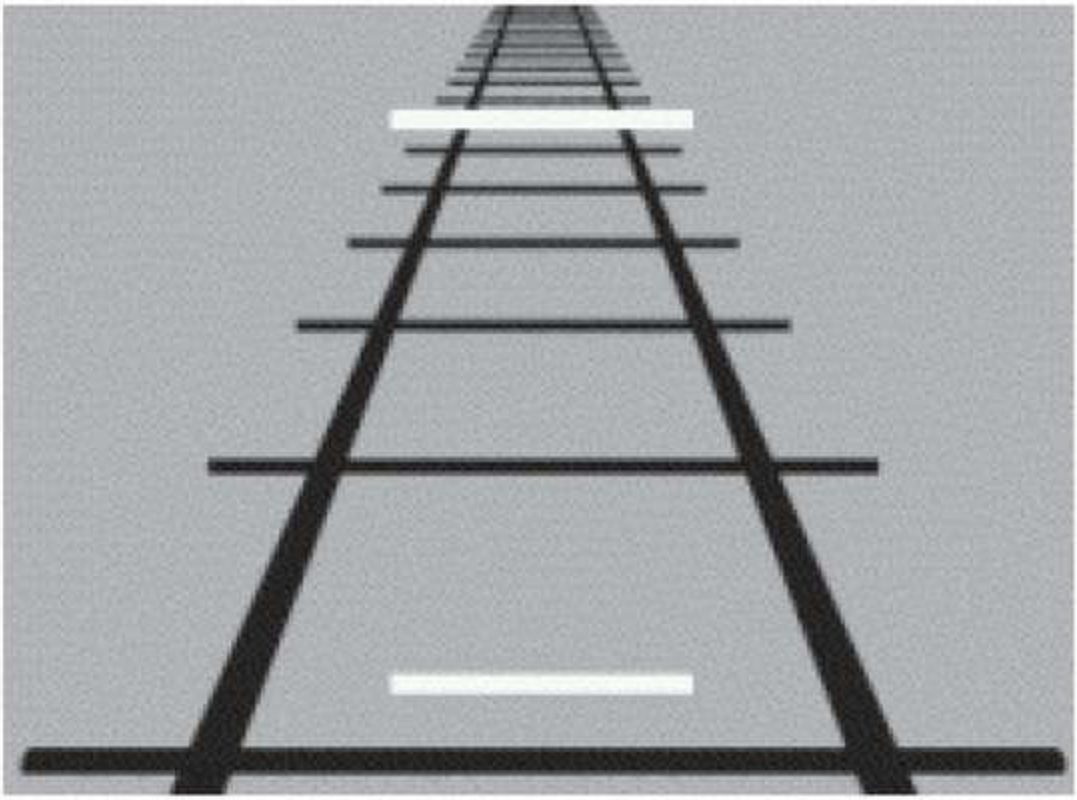
Adapted from *About.com/Paranormal*.

Today, there are literally thousands of "ghost hunting" groups scattered throughout the world. Likely spurred by the glut of paranormal programming on television, it seems that everyone thinks they are a "ghost hunter." Just a few years ago you might be called "weird" or "strange" for any involvement in paranormal research, but now it has achieved normal status. Suddenly, it is cool! Utilizing new methods and technologies that differ greatly from their brethren of 160 years ago, these fearless investigators brave reportedly haunted locations (which are nearly always dark and spooky!) in an effort to

find that proverbial pot of gold. Even still, we are no closer today to the answers that we all seek. Or are we? Has science finally taken an interest in that which we consider “paranormal”? Has there been legitimate scientific research into the cause of these anomalous events? And if so, what have we learned? So as not to leave you hanging, we will go ahead and answer with a resounding YES. However, let’s come back to that in a moment.

What if we told you that the human brain is responsible for everything we perceive—real or imagined? Would you believe it? It certainly sounds crazy, doesn’t it? Let’s try this simple experiment. Take a look at the following image.

Figure 5.1 Ponzo Illusion. Image courtesyof Wikimedia Commons.



Which white bar is longer? If you answered the top one, you are incorrect.

Okay, the bottom? Is that your final answer? BZZZ—wrong again! The two white bars are exactly the SAME length. Our perception (specifically our linear perception) is skewed. The upper line looks to be longer due to our brains interpretation of the converging sides as parallel lines, which recede vertically into the distance. There are thousands of Websites featuring optical illusions, brain tricks, and other mind anomalies. A favorite site is *www.scientificpsychic.com/graphics/*. As we demonstrated with that simple illusion, our perception of the world

As we demonstrated with that simple illusion, our perception of the world around us shapes our reality. If you stood on an actual railroad track and recreated the experiment, the results would be exactly the same. Houston, we have a problem! So, if something as simple as our visual interpretation can be erroneous, then what of our other senses? Is it possible that we are actually misperceiving much of what we consider to be "normal"? What if nothing we experience is truly is as it seems? Do you see the line between normal and paranormal blurring? Hold that thought while we throw another factor into the mix.

Our observation and interpretation of past events act as a vast knowledge database, which we can instantly access and draw from for present experiences. This historical information, when combined with our "real time" perceptive senses, automatically add a "bias." Collectively, this forms the overall personification of who we are, what we experience, and how we subjectively interpret those experiences.

So, with the possibility of incorrect or biased perception, what is real? Are ghosts, demons, UFOs, and other mysteries simply psychological constructs of our own perceptual reality? Or, do they truly exist in physical form? Interestingly, scant physical evidence exists; however, anecdotal evidence suggests that there is more to the question than a simple yes or no.

I (Larry) could regale you with numerous (and often comical) examples of perceptual "misinterpretations" from years of hands-on, paranormal field research. Incredibly, matrixing, paradolia, and apophenia are rampant in the analysis of paranormal "evidence." Whether simply due to lack of knowledge, ignorance, or perhaps even fraud, it is an unfortunate fact that many paranormal groups proffer pseudoscientific rubbish as legitimate

evidence of the paranormal. Even after discounting the obvious, we are still often left with overwhelming experiential or personal experience data, which, though not scientifically admissible, still offers a fascinating glimpse into the human psyche, and serves to contrast differing perceptions.

It would be incredibly shortsighted to study the paranormal (or any unexplained or anomalous topic) without also examining the one common element that is always involved and present in every encounter: US! The human aspect is undeniable, and research within this field likely represents the best means of determining the answers to that we all seek. With organizations such as the Institute of Noetic Sciences (IONS), the Arkansas Paranormal and Anomalous Study Team (ARPAST), and the International Consciousness Research Laboratories (ICRL) taking the evolution of research into the unknown into new, and vastly different directions, the next few years promise to be very exciting indeed.

Subjective Reality

As part of our standard scientific approach we believe it is important to investigate all possible avenues and potential explanations for what is perceived to be paranormal phenomenon. As we have seen so clearly with our demonstration of the Ponzo Illusion, perceptions can shape our reality. But how far does this paradigm extend? Is it possible that our perceptions may not only be “incorrect” at times, but can also be modified or adapted based upon an external influence? In other words, what if we are not solely responsible for our own conscious perception? Can someone or something else serve to drive or persuade our reality?

One of ARPAST’s more intriguing and devious experiments involves the “planting” or “seeding” of false or misleading facts immediately preceding a paranormal investigation in order to determine the level of influence that one’s perceptions may play in their subjective reality. Using creative license to add specific details regarding the reported phenomena—little “white lies,” if you will—we were curious if an external influence (namely a fictional

story) could influence an individual's perceptive reality.

By initially designating two groups—one a control, and one an experimental—then introducing these "red herrings" to the experimental group, we were able to confirm that a very obvious contrast existed. Six of the eight investigators in the experimental group (those who were privy to the planted "facts") logged significantly more paranormal experiential (personal experience) data than the control group. Their collective experiences tracked very closely with what they had been told. In one example, they were told that there had been numerous reports of a little girl who liked to whisper in people's ears. What do you think happened? Throughout the course of the investigation, five of the eight in the control group reported hearing a voice of what they believed to be a young female. One individual was even more expressive, describing the "little girl" as being between the ages of 3 and 4, and speaking with a distinct southern voice.

While attending a speaking engagement in Texas, I (Larry) was asked to lead a group on an investigation that evening at two separate (and reportedly extremely haunted) locations. The group consisted of approximately 40 individuals from all walks of life, and certainly promised to be a handful to manage. I was initially apprehensive and concerned that it would be a logistical nightmare with so many people involved; however, the cosmos was in alignment as it ultimately ended up running smoothly—not to mention being a ton of fun! In addition, it allowed me an opportunity to use this experience as an experiment of sorts. At the second location (which was in a very old building currently being used as an antique shop), I decided to break out "the box."

For those who read our second book, *The Resonance Key: Exploring the Links Between Vibration, Consciousness, and the Zero Point Grid*, you may recall mention of this somewhat-controversial tool. For those who have not (shame—go right out and purchase it now!), the box is an electronic gadget that is currently all the rage in paranormal investigation. Originally designed by Frank Sumption, the box is basically an audio receiver that scans AM broadcast frequencies in a random manner. The device supposedly allows "real-time" two-way communication with spirits. In addition to several commercial offerings, many paranormal groups have developed homebrew

versions of the “ghost box” consisting of modified, off-the-shelf radios. The jury is still out on the device with many skeptics claiming that the utterances can be easily explained via audio matrixing of radio broadcast fragments.

So, back to the investigation. I set the box up on the counter, and the present members took turns asking questions to the box, so that we could listen for “responses.” I had recently been to the doctor for a physical and had my hearing tested. In fact, the doctor had commented that my auditory response was better than most teenagers! Although I do practice “selective listening” at times, my wife’s tired argument that I don’t hear anything holds no merit!

Now, knowing that I possess superman-like hearing, I can honestly say that most of what I heard was garbled, and not readily discernible. At first, there was no clear consensus on what was being said. Then, as the session progressed, something interesting happened. One of the group members suddenly began to “hear” responses, and when she asked if anyone else could hear, nearly everyone did! She would ask a question, and then ask, “Did you hear that? It just said my name!” The room would erupt in a vocal symphony of awe as everyone was now hearing the same responses! This continued for nearly 45 minutes. Unfortunately, my incredible hearing acuity obviously failed me, as I never did hear anything of substantive value. Clearly, however, she was influencing others to hear what she was hearing via the power of suggestion, thereby creating and manipulating others’ subjective realities!

Not only are we able to influence someone’s perception and manifest reality, but we can also create it. In an upcoming chapter we will discuss the work of Dr. Michael Persinger, a professor at Laurentian University in Sudbury, Canada, who has created a device that he calls “The God Helmet.” This somewhat pretentious-sounding device is able to simulate a paranormal experience by bombarding the brain with electromagnetic frequencies.

So, is it real, or is it Memorex? We asked a diverse group of some of the brightest experts in their respective fields a series of questions regarding their ideas and thoughts based upon their research into consciousness and the paranormal. The following contributed answers: Michael Schmicker, author and member of Board of Advisors of the Rhine Research Center; Dr. Pamela

Heath, author and parapsychologist; Stanley Krippner, PhD, professor of psychology, Saybrook University; Nick Redfern, author, ufologist and researcher; Loyd Auerbach, MS, director of The Office of Paranormal Investigations and Rhine Research Center Advisory Board Member; Jay Alfred, author and Dark Plasma theory researcher; Meghan Shannon, Ayahuasca Shamanic Apprentice; Dale E. Graff, author and physicist, former director of Project Stargate and currently runs PSI-Seminars Initiative, which focuses on remote viewing.

WHAT ROLE DO YOU THINK BELIEF PLAYS IN THE MANIFESTATION OF PARANORMAL PHENOMENA?

Belief can help create conditions that are conducive to producing psi phenomena—see studies by Dr. JB Rhine and the Gertrude Schmeidler "sheepgoat" experiments. Even simple openness to the possibility of paranormal increases chances of success in psi experiments. There is a proven experimenter effect. The role of consiousness (attention, intent) must be factored into any scientific discussion of psi.

—Michael Schmicker

To look at the role belief plays in paranormal phenomena, you must separate out different types of events. Experiential research suggests that belief is only relevant when performing intentional ESP or mind-matter interaction (MMI) in a normal (or relatively normal) state of consciousness, or in front of hostile observers. Belief systems don't seem to matter as much in spontaneous psi—which often involves high emotion and occurs cross-culturally regardless of belief—or in cases where significantly altered states of consciousness (such as deep meditation, trance, or dreaming) are involved. This may be because altered states can cause dissociation from ego identity and the suspension of analytical thought, which effectively makes beliefs irrelevant. Of course, successful psi tends to alter what beliefs a performer comes to hold.

—Dr. Pamela Heath

A considerable amount.

—Stanley Krippner, PhD

After more than 20 years of investigating anomalous and Fortean phenomena, I have concluded that belief plays a tremendous role in the manifestation of paranormal phenomena. I admit that when I first became interested in the world of the paranormal, I was, like a lot of people, of the view that Bigfoot was a giant ape, UFOs were nuts-and-bolts alien spacecraft, and the creatures of Loch Ness were still-surviving dinosaurs. However, the more I delved into the subject of unexplained phenomena, the more I began to realize that these phenomena—and many others, too—were not just strange. They were too strange. Bigfoot is beyond being just elusive; it's elusive to the point of being practically phantom-like. It's the same for UFOs: we never get a piece
of definitive evidence; no alien body, no piece of alien metal, etc. And, that goes for Loch Ness too—the evidence is always eerily elusive. My view, today, is that this is because none of these "things" are physical—at least, not in the sense we normally understand and interpret physicality. My view is that belief in such phenomena has quite literally given birth to that same phenomena. In other words, intense belief may lead to spontaneous manifestation and existence.

—Nick Redfern

First, I am defining "paranormal phenomena" for my responses as related to psychic experience, abilities, and phenomena. UFOs have little to do with psi (unless there actually are ETs and they are telepathic or unless UFOs are sometimes psychic projections), and cryptids are biological creatures who, unless they are psychic, also have little to do with psi.

Parapsychologists have long researched the correlation between belief and psychic phenomena and abilities. Humans are necessary for all psychic phenomena in some way—either as witnesses or participants, either living or deceased. Belief is one element of the living witnesses/experients that allows them to perceive or at least notice a perception of something paranormal happening. In the laboratory, believers tend to score higher than chance, while disbelievers score at chance, or in some instances, below chance (as improbably as scoring above chance).

Regardless of how receptive/psychic someone is to telepathic or other psychic impressions, belief is often involved in the actual conscious perception of the phenomena. Things could be happening all around you, and you may be psychically able to "get" the info or experience, but your conscious mind might either not notice what's happening or your disbelief could cause you to totally ignore the perception.

This is not limited to psychic perception, as psychologists have established

that people will sometimes not "perceive" (see, hear, feel) something in conflict with the way they believe the world works.

On the unconscious level, all bets can be off, which is why even disbelievers can have psychic experiences that, if big/affective enough, will be noticed regardless—though they may make up an excuse or other explanation they can live with.

Poltergeist phenomena is derived from the unconscious mind of a living agent who is unaware he/she is causing the movements/breakage/physical phenomena. The phenomena happen because of some stresses happening for the agent, and the outbreak is almost a stress-relief valve. However, belief in such instances is irrelevant.

On the other hand, belief is absolutely at the heart of conscious psychokinetic ability—much in the same way belief in oneself is at the heart of extraordinary performance in sports (the non-steroid kind, of course).

—Loyd Auerbach

Studies in neuroscience have shown that expectations, which are based on our beliefs, play an important part in framing or contextualizing incoming sensory data. In fact we do not actually see or hear the raw data, but the brain's hypothesis of what the sensory data mean. Perception is therefore an active process that is modulated by beliefs. Hence, in many cases, ordinary and mundane phenomena may be misclassified as paranormal where we are highly biased toward a paranormal explanation. However, the reverse error may also occur. In other words, paranormal phenomena may be misperceived and subsequently misclassified as mundane phenomena if we are biased toward non-paranormal explanations.

A skeptic's belief system may block perceptions that may be quite evident to sensitives, resulting in negative hallucinations. Although positive hallucinations occur when a presence is seen or felt when others do not perceive them, negative hallucinations occur when an object can be seen by a certain class of persons but not by a particular observer. This is a type of "blindness" brought about by an individual's belief system. Beliefs and consequent expectations play a more dramatic role when objects exhibit behavior associated with coherent quantum systems. The physical properties of the observed objects may be altered depending on the context in which the observation is made.

—Jay Alfred

I believe belief is tricky when seeing beyond the physical world. If a person has strong beliefs that these things do not exist, they create walls, and block the potential for seeing what may actually be there. At the same time, if a person has a strong desire to see some of this phenomenon, I also believe it is quite possible to desire it so much they can actually "imagine" things that are not there. A truly open mind would allow the most objectivity, so one can see what's there without an emotional attachment to it. In this form the mind is the most clear.

—Meghan Shannon

I am not sure if "manifestation" is the best word; maybe "experiencing" would be better. The term paranormal, has many meanings depending on individual's backgrounds and preferences. I consider paranormal to be a broad term that includes experiences generally referred to as psi phenomena, including extrasensory perception (ESP) and instances of apparent mind-matter interaction that is usually referred to psychokinesis. Paranormal can also include experiences that do not have a psi component, such as unusual visionary or auditory experiences that may or may not exist in physical reality.

—Dale E. Graff

Psi/ESP experiences relate to perception of information that is not accessible by ordinary sensory means. ESP information can be experienced as a hunch or intuition, through a visual, auditory, or some other sensory mode and can be perceived while awake, during dreams, or in some altered state. Sometimes the ESP impressions are superimposed on perceptions from the ordinary senses. The information may be self-evident or may be misinterpreted due to expectations, biases, or incomplete perceptions. Some paranormal experiences may not be ESP based, but result from hasty interpretations of ordinary sensory information or from some type of inner experience that seems to be occurring in external reality.

The role of belief in the reality of psi phenomena, such as ESP, remote viewing, or precognition (perception of emerging future events), is important for psi to be consciously experienced. However, belief is not essential. Some individuals who disbelieve in psi have demonstrated extra-chance results in laboratory experiments. Others have had highly unique and verifiable psi experiences even though they had no prior belief in the phenomenon.

Belief can be very important in some instances where ordinary sensory data is incomplete, or psi information is not clearly perceived. In such instances, the perceptions may be interpreted based on expectations. An

individual sees what he or she expected to see. The perception may be correct or greatly distorted. Similarly, someone who does not believe in any type of unusual experiences will very likely not see what may actually be available through psi or through the ordinary senses. This shift from correct to incorrect interpretations may be aggravated by the emotional situation. Extreme emotions of fear, excitement, and so forth may lead to quick closure on the perceptions, whether psi or ordinary sensory based. Belief, expectations, and emotions can have a significant role in how perceptions, psi based or via ordinary senses, are interpreted. Belief has a role, but not necessarily a primary one for the occurrence of psi perception.

Belief and expectation can be a somewhat passive or receptive mental attribute. Emotion can help set the stage for certain experiences. However, intention, in my view, is the most important mental attribute for experiencing and even manifesting psi and a variety of paranormal experiences. Intention creates an inner dynamic and is goal-oriented. Intentions are the door opener, the activator, of a variety of capabilities and experiences, both ordinary and paranormal.

DO YOU BELIEVE THAT THE MAJORITY OF PARANORMAL PHENOMENA COULD BE A CONSTRUCT OF THE HUMAN BRAIN/CONSCIOUSNESS? IN OTHER WORDS, IS IT ALL IN THE MIND? IF SO, CAN YOU POINT TO A PARTICULAR AREA OF YOUR OWN WORK THAT SUGGESTS THIS?

No. People who posit that, in my experience, are woefully (often willfully) ignorant of the tremendous amount of solid evidence for psi—both from laboratory studies and high-quality field research. We need to start putting evidence before theories. Follow the evidence, without prejudgment.

—Michael Schmicker

This gets into a tricky question: What is consciousness? We don't really know yet. Some hold that everything—all existence—is a construct of consciousness. If so, then all normal and paranormal phenomena would be "in the mind." If you are asking about illusion and self-deceptions, then I would say absolutely not. I've seen physical phenomena that simply could not be explained through

normal means. My areas of expertise include experiential research and mind-matter interaction (MMI). In the last 17 years, I've seen some amazing things, chased tables around a room, tightly curled spoons my hands weren't strong enough to bend, moved objects, and seen wounds heal faster than my medical training said was possible. Consciousness can interact with matter in tangible ways. Whether you want to call it paranormal or anomalous, it's clear to me that interesting things are possible.

—Dr. Pamela Heath

This is a poorly worded question, because all experienced phenomena are constructs of our mind/brain, so I would say yes.

—Stanley Krippner, PhD

I do indeed believe that. Consider, for example, the case of Alexandra David-Neel, who was born on 24 October 1868, in France. Alexandra David-Neel was the first woman to be granted the title of a Lama in Tibet. Throughout her century-long life David-Neel traveled widely across Asia, was particularly drawn to the Himalayas, and in 1932 wrote a truly remarkable book about her travels called Magic and Mystery in Tibet.

She became fascinated by the world of Tulpas—entities that attain a form of reality after being created solely in the imagination. The process requires an immense amount of skill, but those trained in the ancient art of the Tulpa can draw their creations out of the confines of their minds and into the world of the physical.

More problematic, though, are those occasions when a Tulpa has succeeded in crossing from imagination to reality of its own volition, or when a Tulpa began working against the will of its creator.

David-Neel chose to create her own Tulpa, and visualized a fat and jolly little monk—not unlike the Friar Tuck character in the legend of Robin Hood. The process of trying to create within her imagination the image of the monk was both long and arduous; but, in time, David-Neel was able to view the creation not only in her mind, but in the real world, too. A new kind of spectral life form was coming into being.

In time the vision grew in clarity and substance until it was indistinguishable from physical reality. But the day came when the hallucination slipped from David-Neel's conscious control. She discovered to her horror that the monk would appear on occasions when she had not willed it. Furthermore, her friendly little figure was changing in appearance and was becoming evermore sinister.

“I proceeded to perform the prescribed concentration of thought and other rites,” wrote David-Neel. “After a few months the phantom monk was formed. His form grew gradually fixed and life-like looking. He became a kind of guest, living in my apartment. I then broke my seclusion and started for a tour, with my servants and tents.”

She added: “The monk included himself in the party. Though I lived in the open riding on horseback for miles each day, the illusion persisted. It was not necessary for me to think of him to make him appear. The phantom performed various actions of the kind that are natural to travelers and that I had not commanded. For instance, he walked, stopped, looked around him. The illusion was mostly visual, but sometimes I felt as if a robe was lightly rubbing against me, and once a hand seemed to touch my shoulder.”

Somewhat ominously, she added: “The features which I had imagined, when building my phantom, gradually underwent a change. The fat, chubby-checked fellow grew leaner, his face assumed a vaguely mocking, sly, malignant look. He became more troublesome and bold. In brief, he escaped my control.”

At this juncture, David-Neel decided that things had gone much too far and she applied a whole variety of ancient techniques of Lamaism to try and reabsorb the creature into her own mind. Needless to say, the Tulpa was most unwilling to face destruction and the whole process took several weeks to complete.

“I ought to have let the phenomenon follow its course,” David-Neel noted, “but the presence of that unwanted companion began to prove trying to my nerves; it turned into a ‘day-nightmare.’ I decided to dissolve the phantom. I succeeded, but only after six months of hard struggle. My mind-creature was tenacious of life.”

And that’s what I personally and strongly believe: the mind creates the many and varied monsters, mysterious beasts, aliens, or whatever of our world, and they then develop a degree of quasi-intelligence, and a deep yearning to stay alive—albeit in a fashion that is semi-physical and phantom-like. But, they have to interact with us—to ensuring they are seen, and to ensure that belief continues. And as long as there is belief in the Tulpa, it will not die. In other words, being seen by us is a vital component of its existence.

—Nick Redfern

First of all, our perception of what’s “real” is ultimately “in the mind.” We can have objective happenings and measurements, but our perception of such things is subjective. Remember that the data coming through our senses is

processed in the brain/mind and then perception happens.

As to a "construct," here I assume you're asking if ghosts and haunting are such things.

The evidence and research of more than 125 years of psychical researchers and parapsychologists indicates a few things:

Apparitions (conscious, deceased entities) seem to be "seen," "heard," "felt," etc. by witnesses in their minds; in other words, the model is that witnesses receive information on the "person" that the apparition used to be from the apparition, most likely through telepathy. Some people process that information as visual, auditory, olfactory, or kinesthetic, or in combinations (most often "seeing" and "hearing").

But the actual "seeing" is not through the eyes and hearing not through the ears—this is pretty clear, as if the ghost was visually sensed (eyes), everyone present could see/hear him/her and photographs would be no problem.

Hauntings—what folks often call residual hauntings—also called "place memory" in our field are stationary, non-interactive, and very possibly related to some function of the environment. They seem to be a result of living people perceiving information in the environment/house/object somehow imprinted there in the past (recent or even distant). People can perceive some of this information in different ways—again processing it as visual, auditory, olfactory, or kinesthetic (or combination) perceptions. Higher than background EMFs (sometimes in the local geomagnetic field) are most often associated with this phenomena.

Again, the perception happens "in the mind," though the cause, as with apparitions, is outside the mind.

Poltergeist phenomena are psychokinesis (mind-matter interaction) in action. Although clearly not happening "in the mind" they are caused by the mind.

One other note—if an apparition moves something, it is still psychokinesis. In such a case, the ghost's mind is moving the object.

—Loyd Auerbach

All perceptions are generated by some brain or cognitive system. To perceive

you will need a cognitive system to process incoming sensory data. Both the external and the internal context (that is, the internal emotional and mental environments) of the observer play important roles in interpreting and contextualizing sensory data. We may see things that are not there because of constructions or projections by the brain. Cognitive illusions are common and can be proven, as illustrated by the many well-known visual illusions. This is a well-tested area in neuroscience. The majority of reported paranormal phenomena may therefore not be paranormal. However, we should guard against "neuro-idealism," that is, discounting everything paranormal as non-existent because they are constructions of the brain.

Michael Persinger, the neuroscience researcher, claims that by putting on a specially made helmet, the brain can be made to generate erroneous paranormal experiences, such as feeling the presence of (invisible) beings. However, we cannot conclude from this that all these experiences do not actually take place in reality. A good trickster can show a very good hologram of an orange from a distance and observers may believe that it is in fact a real orange, although it is only a representation. We cannot conclude from this that all perceptions of oranges do not represent real objects or that real oranges do not exist in the real world. Persinger is simulating presences, which the brain (and its dark counterparts) has evolved to respond to. In other words, some aspects of Persinger's experiments are tricking the brain to conclude that it is seeing or sensing something that, in other circumstance, actually occurs in reality.

Because perceptions are generated by what the senses signal to the brain through a network of nerves, any interception in the network to introduce erroneous data will make the brain come to erroneous conclusions. It will not be surprising, if following Persinger, scientists are able to induce all the sensations of eating an apple pie in the brain of a person. This does not mean that an apple pie was actually eaten. Neither does it mean that apple pies do not or cannot exist in reality. The simulation in the laboratory is irrelevant in establishing the reality of the object in the real world. Simulating experiences in the laboratory does not mean that the corresponding actual experiences do not occur. A person who concludes that ghosts and invisible presences do not exist in the real world because similar experiences can be simulated in a laboratory by electrical and magnetic interventions is committing what can be described as a "simulation fallacy" in the logic of his argument.

Other aspects of Persinger's experiments actually deactivate certain brain circuits, so that the subject is introduced to a new reality. When this happens, the locus of awareness shifts from the carbon-based body to the hypothesized dark bioplasma bodies. Although it is not possible to detect these "presences" directly with our current scientific instruments, a human being's own subtle bioplasma body may be able to sense these invisible beings, which come within the range of sensory systems in the bioplasma bodies. In these

particular cases, real presences (which our current scientific instruments are unable to detect) are being detected by semi-independent cognitive-sensory systems in our bioplasma bodies. In this sense, ESP (Extra Sensory Perception) is a misnomer. These are, in fact, ASP (Alternate Sensory Experience) generated by an alternate subtle bioplasma body that is coupled to our carbon-based body.

Genuine paranormal phenomena exist alongside mundane phenomena. The existence of genuine paranormal phenomena is not only supported by a smaller number of genuine paranormal reports, but can be expected based on extrapolations of current scientific theories and is increasingly being evidenced in rigorous psi experiments.

—Jay Alfred

This is a difficult question to answer, and for me gets a bit esoteric, but I'll give it a shot. From my experience with my work, I have been able to open my body's channels (both in and out of ceremony) to the point where I can often tap into the "unseen." I could be sitting around watching TV, and feel, very physically in my body, energy that comes around. What exactly the energy is up to interpretation of the person (for me, this is a skill that has been developing naturally.) This is the part where the mind could go haywire.

If a person is very fear-based, their mind may immediately jump to thinking it is an "evil spirit." A more skeptic base would assume I was just feeling something from within my body. I may get a sense or a visual showing that it is something unknown to me, or the spirit or healing energy of a particular person. The point is that we run everything we experience in life through the body and mind, and I believe we can see an outpicturing of that in our physical world (this is the esoteric part!). So is it possible the seeing of paranormal phenomenon is an outpicturing of the mind? Absolutely—but no more than creating a car crash through a subconscious imbalance. But do I think this is "all in people's heads"? No. Some people are open enough to see and some aren't. Some may be a little "off " and misinterpreting what they see, but from my experience, time and time again, I see validation that there is at least something more than we can see in our physical worlds.

—Meghan Shannon

All of perception is a construct of the human brain! All of our senses provide data to the brain where the experience of "external reality" is created. We learn what is "out there" and "in here" (thoughts, imagination, dreams…) through experience, through trial and error. Sometimes "in here" experience can be confused with "out there" reality. Psi experiences, for example, can appear to be from external reality when they are an inner perception. Some

forms of inner perception, such as from intense focus, may also appear to be external.

My professional and independent research with psi/remote viewing phenomenon in both the awake state and the dream state has led me to understand psi, ESP, remote viewing, and so on, as an internal experience that involves memory and other basic perceptual aspects of the brain. Our brain neuronets search for the best representation of the psi perception so that it can be understood. Sometimes the perceptions are only approximated or interpreted too quickly. In some dramatic dream experiences especially in lucid dreams (a dream when you are aware that you are dreaming), the dream imagery briefly continues after wake up and the dream figure seems too "out there" in reality.

However, there is another consideration. What is the mind? As a result of some 40 years of psi investigations, I no longer consider the brain and the mind to be identical. Not all of the mind is in the brain. Consequently, it is not possible for me, or anyone, to say that all of our perceptions, especially those that are psi based, are only a "construct of the human brain."

If all of our minds and individual consciousness are within a larger consciousness field, then any perception, especially some of those defined as paranormal, is also an aspect of this consciousness field. The essence of this mind field or consciousness field is probably similar to the nature of light: it can be either a wave (the field) or a particle (individual consciousness). The concept of a hologram is appropriate: a small section of the hologram (our mind) is contained or represented in the larger hologram (the consciousness field). This means that we cannot say with absolute certainty from where a perception originates. It could be totally within our brain based on external sensory or psi information, or it could be a perception from another section of the consciousness field that seems to be from our immediate external reality. In some instances, external reality may conform to intentions and cause appropriate correspondences that are real effects and can be measured by scientific instrumentation. For example, a paranormal event such as the perception of a ghost or apparition may be both an inner experience and an external event or manifestation. More than one person can perceive it in a certain location, and certain physical effects can be detected.

The source or cause of these experiences can be debated, but some of them are not mental constructs based on expectation. They are real in some sense. The challenge is to determine the difference between those perceptions that are only produced within an individual's brain and those that are from an external source, either in physical reality or from another region of the consciousness field. The psi process may also be involved.

From my professional and independent research with remote viewing phenomenon and with psi dreaming, I consider the actual psi experiences to be an inner perception within the brain. Their source is external to the physical brain from other brains /minds or from some unknown aspect of the larger mind/consciousness field. Sometimes inner perceptions may have a psi component that causes or correlates with a real effect in the external environment. I am personally familiar with research into spontaneous psychokinesis that provides some evidence for such effects, even though scientific proof is difficult to demonstrate. I have also observed laboratory research with electronic devices demonstrates focused intention on these devices can result in observable effects.

—Dale E. Graff

WE HAVE READ ABOUT OR SEEN THE "EFFECTS" OF PARANORMAL PHENOMENA FOR THOUSANDS OF YEARS—REPORTS AND STORIES OF GHOSTS, UFOS, CRYPTIDS, AND SO ON. THESE WE CONSIDER THE PHYSICAL EFFECTS, SO TO SPEAK. WHAT IS YOUR THEORY AS TO THE "CAUSE" OF THESE PHENOMENA?

There is no "cause." They're simply part of reality.

—Michael Schmicker

One of the problems with talking about paranormal phenomena is that disparate physical effects get lumped together inappropriately as if they had a single cause. I've never done an investigation that didn't have a multiple underlying causes, normal and paranormal, all tangled together. For example, in haunting investigations you often see malobservation, misinterpretation, environmental factors, and fraud (whether conscious or unconscious) mixed in with the paranormal. My job as a parapsychologist is to separate them out and determine which finding, or piece of evidence, fits where on a case-by-case basis.

We are still in the early stages of understanding paranormal phenomena. Until we have better theories and greater insight into the processes involved, it will be hard to tease out the ultimate causes of many of our observations. However, recent physics experiments suggest that our common understanding of thermodynamics and time may both need to change. It appears that in at least some studies, entropy may decrease (contrary to the second law of thermodynamics) and that retro-causal effects may be possible, with a future result working backward in time to manifest a cause. It's mind-boggling stuff.

—Dr. Pamela Heath

They are not "caused." They "emerge" as a result of complex interactions with the social and physical environment.

—Stanley Krippner, PhD

My personal view is that the so-called physical effects of exposure to paranormal phenomena, such as Stigmata, "radiation burns," and needle marks where aliens have supposedly taken DNA samples can also be placed in the Tulpa category. In other words, belief in the phenomena can spontaneously cause the human body to react in a fashion that adds weight to the scenario that is being played out via the Tulpa. We might accurately call these manifestations "Supernatural Hives" in simplistic terms: marks and rashes on the body that don't have literal, external origins—as many researchers actually think is the case—but that are a physical outgrowth of the mind's creation of a certain belief-system—whether it be a DNA-stealing alien or an emotion-stealing Incubus.

—Nick Redfern

There is no one cause for all of these things. UFOs are not the same as ghosts/psychic phenomena, which are not the same as cryptids, and so on. There's a fundamental flaw in lumping all of this stuff together and asking for a theory of "cause." Even though these things may be "para" normal ("on the side of " normal), asking for one "cause" or "theory" for all is like asking for one cause or theory for gravity, perception, photosynthesis, and electricity—all of which can be lumped in the "normal" category.

The only possible exception would be if they are all caused by/in the mind—projections of the mind—which they are fairly clearly not. As for one central theory of the "cause" of ghosts, poltergeists, psychic abilities—these are generally a function of consciousness, and research in Parapsychology, Physics, and other areas attempting to study what consciousness is, whether it is merely a "trick" of the brain or something resident in the body/brain yet different from brain, are ultimately going to provide better models and theories of what's going on.

Hauntings may be different, as they may be a function of our brains/consciousness interacting with something physically in the environment—a recording of the past, if you will. This may actually be a result of a purely physiological/physical interaction (see, most notably, the work of Michael Persinger in Canada with magnetic fields and brain states/hallucinations).

—Loyd Auerbach

Only a small subset of these can be classified as genuine paranormal phenomena. So what are these? The matter that is visible and currently directly measurable is composed of particles that have been identified in the physicists' "Standard Model." However, the majority of scientists now believe that this "ordinary matter" makes up less than 5 percent of the universe. In fact, it makes up less than 20 percent of all the matter in the universe. The other more than 80 percent is composed of invisible matter that has been dubbed "dark matter" by scientists.

Dark Plasma Theory argues that dark matter is present in the Solar System, including on Earth. Evidence shows that the Sun and the Solar System are under the gravitational influence of invisible dark matter in our galaxy. Dark matter particles have been raining down on Earth every day and night for the past 4.6 billion years. These particles are captured by Earth's gravitational field. Furthermore, the embryonic Solar System also contained dark matter. There are therefore many reasons to infer that there are low-density halos of dark matter particles interpenetrating all the planets, including the Earth—effectively forming (currently) invisible "counterpart-Earths" that co-rotate and share the same gravitational field as the visible Earth. The Theory questioned in 2007 if the density of dark matter around Earth was underestimated.

Computations in late 2008, by Stephen Adler of Princeton University and Xu and Siegel from the University of Arizona, suggest that dark matter density in the Solar System and around Earth exceeds the galactic halo density significantly, and is much higher than previously thought. According to the Theory's estimate, the visible Earth is gravitationally coupled to a Jupiter-sized dark matter halo. As dark matter clumped, it created conditions for a dark biosphere to form. This dark biosphere gave rise to dark matter life forms and consciousness throughout millions of years.

The Theory argues that dark matter is largely in the form of plasmas of exotic particles (including supersymmetric particles such as charginos and neutralinos). It has been shown in laboratory experiments throughout the past 10 years that minimal ordinary plasma cell-systems can be generated in the laboratory. The Theory therefore suggests that minimal dark plasma cell-systems were generated within this dark halo/biosphere in the early Earth and predicts the existence of terrestrial dark plasma life forms, which evolved from these minimal plasma cell systems. Furthermore, unlike chemical-based life forms, dark plasma life forms are compatible with life in a supersymmetric universe.

These life forms would be as varied in scale, structure, and intelligence as carbon-based life forms—as different as a microbe from a whale; a mosquito from a tiger; a giraffe from a crocodile; an ant from a human being. Their degrees of intelligence and awareness would be as different as a centipede's awareness from the awareness and intelligence of human beings. The taxonomy of these plasma life forms is wide and varied. Some of these plasma life forms have interacted with us in the past (intentionally or unintentionally).

The entities that we have loosely identified as ghosts, angels, jinns, demons, deities (for example the Marian apparitions in the atmosphere), aliens, biological UFOs, fairies, and sightings of the recently deceased (on the surface of the Earth) are characteristic of these predicted exotic plasma life forms from interpenetrating dark plasmaspheres or counterpart Earths. They constitute an ecology of plasma life forms that evolved throughout Earth's history and sometimes formed symbiotic relationships with the visible carbon-based life forms that we are more familiar with. Homo sapiens *are the products of carbon-based bodies that evolved and formed symbiotic relationships with some of these plasma life forms (that is, the result of a symbio-genesis). When the carbon-based bodies died, the bioplasma bodies continued their existence in counterpart Earths.*

—Jay Alfred

I believe these physical manifestations are simply when the energy of the phenomenon is dense enough to take a more physical form, and the person experiencing it is open enough be able to see it.

—Meghan Shannon

There are a variety of experiences that are often associated with the word paranormal. Some of these are probably only inner perceptions that result from or are caused by expectations or fears. They may be totally internal subjective experiences, possibly aided by some perception in reality that conforms to the expectation and interpreted accordingly. Other paranormal experiences may be a result of expectations and psi perceptions. Some ghost or apparition experiences, for example, may be caused by expectations and the appropriate external environment. Other ghost or apparition experiences may be caused by a psi connection with the surrounding consciousness field. This could include a memory trace of emotional events that occurred to someone no longer alive. It is also possible that some surviving aspect of a deceased personality is the source, via psi, for the perceived ghost or apparition experience and other psi manifestations that sometimes affect physical reality.

Experiences described as UFO sighting or UFO abductions can have a variety of causes. Some may be only subjective inner experiences interpreted as a UFO; others may be similar to a lucid dream, but with UFO content usually of a personal symbolic nature. Yet others are shared experiences and probably have a psi aspect since not all present observe the UFO. Some UFO experiences link with emotional or physical trauma and correlate with serious illness onset or recovery. In some instances, UFO imagery may relate to a spiritual situation, but presented in a visual form acceptable to modern society and its scientific space age language.

—Dale E. Graff

Why do you think that with all the paranormal researchers and amateur "ghost hunters, "UFO hunters," and "monster chasers" out there scientists have yet to find solid supporting evidentiary data? Do you believe these researchers, both scientists and layperson alike, are looking for ghosts in all the wrong places?

I suspect the problem is a combination of many things, including, but not limited to: (1) a clash in paradigms, with people refusing to look at the actual data that already provides evidence of something anomalous, and publicly ridiculing anyone who attempts to deepen our understanding of these phenomena; (2) lack of funding, which affects not only the ability to perform research, but also the ability to publicize its results and educate the public at large; (3) the legal inability of investigators working with military, corporate, or private funding to share their findings; and (4) inadequate ways of understanding or measuring consciousness and subtle energies.

—Dr. Pamela Heath

This is a very good question. I think the phenomena are elusive and complex. Because they are not "caused," they cannot be adequately studied with current scientific paradigms.

—Stanley Krippner, PhD

I do indeed conclude that the majority of researchers are looking in all the wrong places, and that's why the hard evidence is still eluding us. Most researchers are obsessed with the idea that the things they are looking for (Bigfoot, aliens, and so on) are flesh-and-blood. However, the evidence is wholly lacking in this direction. Bigfoot, for example, is described as a huge ape-like creature, perhaps weighing in at 400 to 600 pounds. Where is the evidence of its eating habits? Whole colonies of such creatures would require

massive amounts of food per day, yet we see no evidence of such immense feeding. In other words, these things appear to be flesh-and-blood, but on investigation none of them act in a fashion that we would expect from physically real animals. They totally defy common sense.

So, yes, people are looking in the wrong places. Trying to catch Bigfoot with nets, or shooting it with guns, or capture it on night-vision cameras is pointless when you are dealing with a creation of the mind, that has a form of twilight existence that we can't even begin to properly understand. Researchers should realize that these things only exist because we believe in them, and to find them we don't need to go into the dark woods. Rather, we need to go into the darkest and deepest corners of the human brain. When we do that, and when we understand how belief can lead to spontaneous creation of anomalous phenomena, then we will find Bigfoot, the Yeti, and the black-eyed little aliens from Zeta Reticuli.

—Nick Redfern

First of all, I can only address the "ghost" issue. But for all of these things, other than haunting WE are not in control of when these things happen. The late astronomer/UFO expert J. Allen Hynek often said that one cannot study a UFO, but only UFO reports and any physical evidence apparently left behind. And if one had a UFO, it would no longer be "unidentified" (it would be an IFO). Cryptids, because they are biological creatures, are found if one is in the right place at the right time.

As for ghosts. By definition, they'd have to cooperate with us to be "studied." Our very definition makes them people (okay, dead people). Just like you can't take a picture of a living person if he keeps moving behind the camera, a ghost has volition/consciousness and can choose not to participate. Poltergeist phenomena happens spontaneously, but we can (and do) study the ability behind it, which is called psychokinesis.

Hauntings are a different animal. As they are location (or even object) specific, research can be conducted. But frankly, those of us in the scientific field of Parapsychology are often appalled at the complete lack of understanding of the scientific method (and generally the misconceptions about the equipment and phenomena) of the vast majority of amateur ghost hunters (and even those who choose to call themselves "professional"). Use of technology is not, in and of itself, a scientific process or method (otherwise, using my microwave oven would be "doing science"). One can teach a chimp to get excited by the lights on a K-2 meter. EVP sessions are not in and of themselves "doing science."

Science is in the analysis, hypothesizing about the data, correlating the data to people's experiences, conducting experiments, and trying to understand what the data mean. Science is also doing reviews of the literature and past research to find out what's been done before, to avoid lines of experimentation that clearly don't pan out, and to build on research that both supports one's hypotheses and even leads one in new directions. Science is about sharing data with colleagues, and discussing opposing concepts, models, and theories to really understand what makes the most sense given the data.

There are few scientists working on the ghost/haunting/poltergeist question outside of the lab. We have little funding in the lab, and almost no one funds field research. I, myself, have to support my field work with other work. Parapsychology is underfunded, and the behavior of too many amateur ghost hunters has not helped our case.

One side note: Just because some ghost hunters may be trained in one area of science does not mean they are automatically applying what they know of science to their investigations. Physical scientists often know nothing about working with people's experiences (which fall into the social sciences), and social scientists have little training in alternative explanations that are based in the environment/physical world.

—Loyd Auerbach

I believe the inherent problem is that the science, based on the historical premises of how to research, cannot yet account for things that are not yet available for the majority of the population of people to see. I believe the more dense (energetically) the physical body is, the less a given person is able to see and experience, due to the blockages in the receiver channels. If the scientists themselves have these blockages (like most people do) they can't even know what to look for, and how to measure it, based on scientific premise. Like I mentioned before, choosing not to believe it is an energetic block in itself, which leaves the person inherently biased before they even begin the research. As technology, science, and the human mind evolves (note the progress of Quantum Physics) it will be much easier to measure these things in time.

—Meghan Shannon

For experiences where ghosts or apparitions are believed to be perceived, some potential evidence has been documented by on-site investigators. This evidence may not be considered as solid by conventional science; however, there is an accumulation effect that, in my view, provides some degree of

support for the experiences. The question should be focused on potential causes, regardless of the lack of solid evidence. The term solid evidence may not be agreed upon, therefore, confounding potential assessments.

It may be that many or most of the spontaneous paranormal experiences are only internal events. But some may not be totally subjective. For ghosts and apparitions, I do not believe that "ghost hunters" are looking in the wrong places. However, they may not be casting their investigative net wide enough. They may not be looking into enough places. It seems to me that on-site investigations involving proper instrumentation along with monitoring the physiological parameters of those involved, including the researchers, would be a productive approach. Instrumentation could include sensitive electric and magnetic field detectors and consciousness field detectors (the REG devices). Physiological instrumentation could include brain EEG waves and other physiological parameters. A collection of dreams, especially nightmares, from those involved may also provide insight on the cause of the experiences. Having those involved assessed for psi/ESP ability could be helpful, as would assessing their ability to shift states of awareness. Actual proof of real ghosts and apparitions may still not be possible; however, more information on the cause of the experiences may result from such an integrative approach. A similar approach could be used in the investigation of other paranormal experiences. However, their unpredictable nature and the variable field or on-site environments may not confirm to systematic study.

—Dale E. Graff

These answers provide interesting insight as to where research into paranormal phenomena *should* be going. "Should" as in: once the TV shows get with the program, and the many bandwagon jumpers out there calling themselves "ghost hunters" fall by the wayside. Too much attention has been paid to the evidence, or data, such as EVP, photographs, video, and other "effects," and not enough attention has been focused on the "causes" of these types of phenomena. The problem is, as stated before, we may be looking for ghosts in all the wrong places. Because, as we will see in the next chapter, the mind is a much more powerful creator of reality than we ever imagined.

To say that all anomalous or paranormal phenomena occur in the mind may not be the whole story. Perhaps it is a combination of interior and exterior forces at play. It might even be that the interior beliefs and intentions are somehow linked with the ability to manifest physical "effects" in the manifest world. Yet, there is more and more "circumstantial evidence" pointing to the interior force as being the primary instigator in what we see,

think, feel, and do; even whether we live or die.

Mind power—activate!

Chapter 6

I PUT A SPELL ON YOU

The tongue has the power of life and death.

—Proverbs 18:21

Put gris-gris on your doorstep And soon you be in the gutter Melt your heart like butter, An-an-and I can make you stutter.

—"I Walk On Gilded Splinters," Dr. John Creaux (The Night Tripper)

The meme for blind faith secures its own perpetuation by the simple unconscious expedient of discouraging rational inquiry.

—Richard Dawkins

Some people will ostensibly believe anything. Of course, there are those who take it to an extreme, fully believing every conspiracy theory, plot, or scheme without corroborating or substantive evidence. However, for most of us, "that voodoo that you do" may actually have a lot more power than imaginable. Although the mind can be a terrible thing to waste, it can also, when infected with a negative or destructive meme, thought, or suggestion, become just a terrible thing. In previous chapters we examined the role of perception, belief, and suggestibility in attempting to explain how reality comes to be reality. Now it's time to get a little more down and dirty and find out if we can actually use our minds to create, construct, and do damage. Even more intriguing, can others use their minds to do damage *to us* a la the 1981 cult thriller movie *Scanners*?

Rather than discuss a fictional plot involving the use of one's telepathic or telekinetic powers to explode other people's heads, let's look at a real-life

scenario involving a horrific report that came out of Nigeria in October 2009. This report describes 13 churches involved in denouncing and torturing young children who were accused of witchcraft. These children were then burned, tortured, and even murdered, often by ignorant family members eager to free themselves of their devil kin. Their beliefs caused them to do the most atrocious things imaginable to children who were guilty of nothing more than simply being children, defenseless against the charges of Christian pastors who literally took the Bible phrase "Thou shall not suffer a witch to live."

When belief ends up killing children, we know that we have a serious problem. The United Nations Children's Fund reported to the Associated Press that tens of thousands of African children have been targeted as witches, and that it is usually the orphaned, sick, and poor children who come under the abusive attack of religious fanatics who should be rotting in jail, not running churches. As if the persecution is not bad enough, perhaps even more horrific is the fact that smaller churches are literally creating "witches" to burn, beat, and kill just to keep up with the larger churches. It's all about power, influence, and money. Sam Itauma of the Children's Rights and Rehabilitation Network told the AP, "Even churches who didn't find witches are being forced into it by the competition…. They are seen as spiritually powerful because they can detect witchcraft and the parents may even pay them money for an exorcism."

The Nigerian Apostolic Church, one of the major offenders, was of course unavailable for comment, no doubt due to the fact that they were too busy killing and maiming.

Lest we think this kind of twisted belief occurs only in less developed or less educated countries, we only have to watch our own headlines to read of the abuse, murder, and torture that are committed every day in the name of religion, bigotry, and hate. On September 12th, the body of part-time census worker Bill Sparkman, who was also a substitute teacher, was found hanged in rural Kentucky with the word *fed* scrawled into his chest (police did not say how the word was "scrawled" or with what). According to a CBS news report, Bill was described by people who knew him as an "innocent" person who always saw the good in others, a Christian doing a little extra work for the Census Bureau. It seems that Sparkman was killed by bigots in an area

rampant with meth labs, pot fields, and conspiracy theorists who “believed” that the government was out to get them. Belief can kill. And it does. Remember, too, that most, if not all, wars have their origin in a difference of belief.

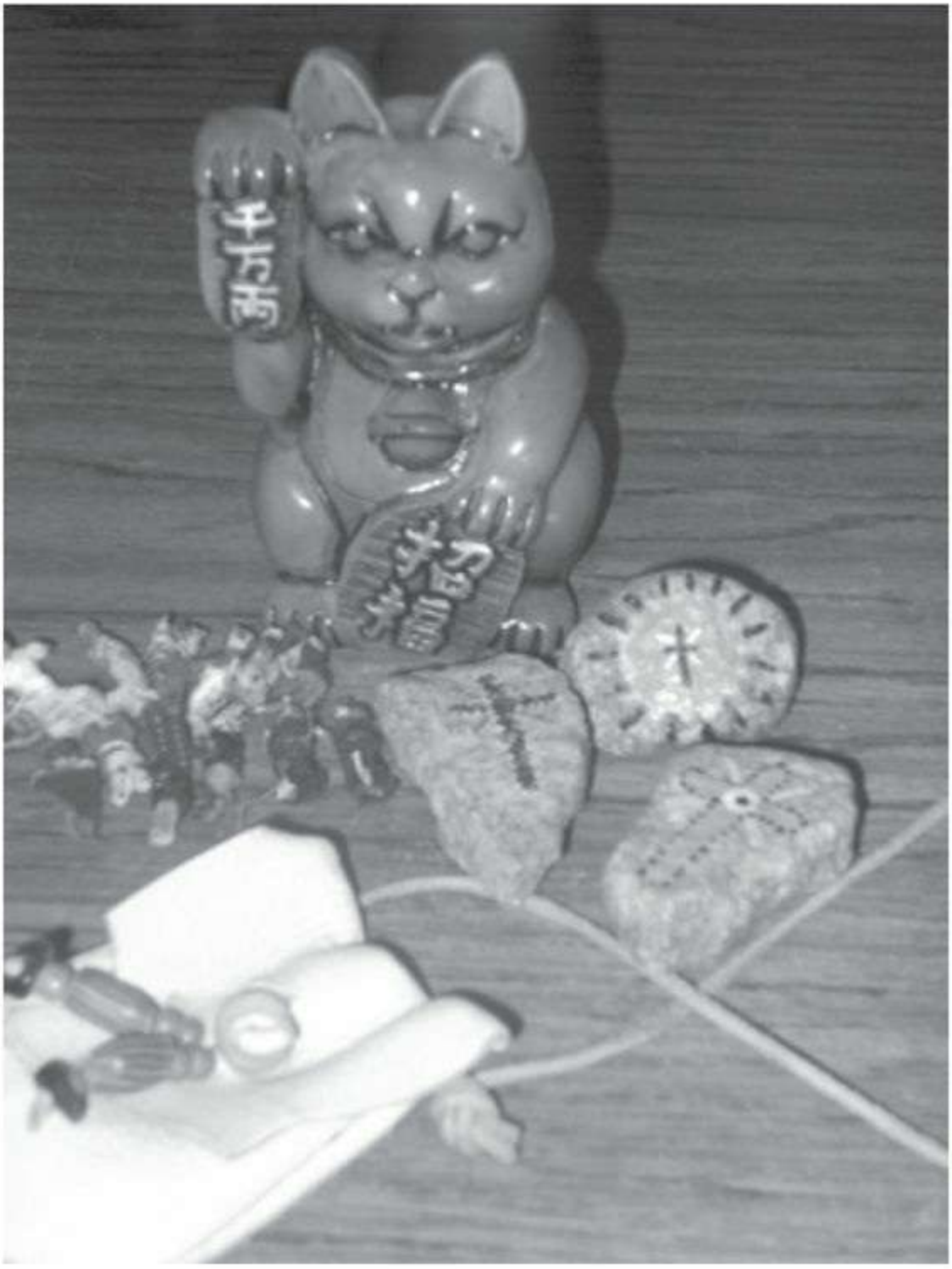
The Power of the Mind

We like to say that the human mind is “powerful beyond belief,” but the truth is it is only as powerful as our belief allows it to be. Whether we are talking about that lucky horseshoe charm we keep in our purse for good luck, or that voodoo doll we used to try to hurt a bastard of an ex, we buy into belief all the time. Ignorance is not a legitimate excuse, because even the most educated and powerful peoples on the planet are guilty of superstition, prejudice, and intolerance.

But how far to the extreme can the power of the mind be taken? Can you cast a spell on someone and make him or her love you? Can you kill people by simply cursing them and pointing a stick at them, or poking a pin in a doll made to their likeness? Can you heal yourself or others of a terminal disease simply because you believe you can?

Religion has long promoted objects such as magical talismans and enchanted amulets to either ward off evil or bring safety and security. Fetishism, the belief that a physical object can have supernatural powers, is as old as humanity itself. The use of blood, animal fur, claws, beads, coins, rings, feathers, stones, gems, crystals, and specific plants and animals by native and primitive peoples is no different from our use today of crucifixes, Buddha statuettes, Holy Water, Star of David necklaces, rosary beads, voodoo dolls, the Italian Horn to ward off evil eye, worry beads, prayer stones, and even four-leafed clovers and lucky charms. Placing revered power in an object is as much a part of today’s traditions and religious practices as it was for our ancestors, who applied value to different objects according to their personal worldview and beliefs.

Figure 6.1 Fetishitems believedto bring prosperity, ward off evil, and put an end to worries.Image courtesyof Marie D. Jones.



Religion

Idolatry, totemism, and even animism are fetishism beliefs. But even with the change from animism and polytheism to monotheism, the belief that symbols hold as much power and influence as what they are supposed to symbolize still makes up a part of everyday religious life. When Christians take the body and blood of Christ at Communion, they may not realize it, but they are practicing a type of fetishism, giving the wafer and wine a level of power that they do not have as physical objects, but rather as symbols of something far greater.

An August 2009 PEW Forum on Religion and Public Life poll showed that a surprising number of adults in the United States believe in things such as curses and spells. The nationwide survey of more than 4,000 adults, most of them from one Christian denomination or another, found that 16 percent believe in the "evil eye," and that some people can cast spells and curses on others. Eighteen percent believe they have seen a ghost, 30 percent claim to believe in astrology, and—wait for it—nearly 26 percent of those surveyed believe that "spiritual energy" can be found in an object, such as a tree or rock.

Yet, some may argue that the objects DO have power on their own. Perhaps we are somehow sending the object energy, which is then reflected back to us (or even absorbed into the substrate material itself) based upon our motivation or use of the object. If we believe strongly enough that a lucky charm will make us, well, lucky, perhaps we may be raising the resonant frequency of the object to match the resonant frequency of our intention. We may be "instilling" a particular energy into the object, which then raises or lowers the object's actual resonant frequency, depending upon whether it will be used to charm, or to harm.

Talismans and amulets are said to protect the wearer from dark powers and to attract and magnetize desired effects such as money, love, and influence. Do you wear a cross or Star of David? Have you ever carried a "lucky" rabbit's foot? (Lucky for you maybe, but, certainly not for the rabbit!) Generally, we think of the occult arts when we think of talismans—intricately designed charms worn about the neck or kept in a pocket. However, one only has to walk into a church, temple, or synagogue to see modern-day talismans. Although the Catholic Church and Christian churches in general shun

talismans and amulets as “witchcraft,” their own use of beads and crosses and statues of saints show that the idea of putting power into a physical object is not always the domain of evil-doers.

In the Jewish tradition, amulets are abundant, many carrying holy names or phrases taken from holy texts. The Jewish tallis is a fringed prayer shawl with knotted tassels used in a similar fashion as Catholic rosary beads. The word *tallis* even sounds similar to “talisman,” although most linguistic experts believe the word *talisman* is of Greek origin, from the word *telsma* meaning “to initiate into the mysteries.” (The word *amulet* comes from the Latin word *amuletum* for “an object that protects a person from trouble.”)

Figure 6.2 *This popular talisman is used to ward off the evil eye and deflect bad luck. Image courtesy of Marie D. Jones*

Symbolism cannot be separated from belief, especially when the belief is in the unknown or unseen. These objects serve as a means for us to “objectify” the subjective or bring form to the formless. Sometimes they can even be a bit novel and amusing, as in a recent experiment courtesy of Dean Radin, PhD. Radin, who is a senior scientist at IONS, the Institute of Noetic Sciences (made famous in Dan Brown’s *The Lost Symbol*), led an investigative study for the journal *Explore* involving the use of chocolate. Yes, chocolate. (Larry’s note: Why do I always seem to pick the wrong research projects to be involved in?) Radin’s study involved two batches of

dark chocolate: one meditated upon and infused with the positive intentions of Buddhist monks, the other a batch of plain chocolate. The double-blind test was carried out on two groups of volunteers who filled out a mood questionnaire for the three days in which they consumed the chocolate. None of the volunteers knew which group they were in, although if we were in a study group involving chocolate we wouldn't care which group we were in as long as we got the goods!

Oddly enough, it was the control group that showed more positive mood and well-being, although the intentional group did see a big mood surge on the first day of the study—proving that chocolate, whether meditated over or not, is a fetish worthy of consumption!

Voodoo

The most obvious use of fetishes, talismans, and amulets comes to us from the West African traditions and folk beliefs. West African vodun or voudou is a religion practiced throughout coastal West Africa. It is an animistic tradition, with a cosmology filled with a hierarchy of various *vodun,* or spirits and divine elements governing humans and the earth. Deities are called *orishas,* suggesting a pantheistic worldview, but there is One God, as in monotheism, with the *orishas* as God's helpers (similar to the idea of the Christian God and his angels). The history of vodun is rich and filled with symbolism, ritual, and practices many Westerners might find foreign—even frightening. Haitians also practice vodou, Dominicans have their vudu, and in the States, it is referred to as voodoo, or hoodoo. Candomble is similar in roots and rituals, and is practiced in many countries, most notably in Brazil as Candomble Jeje.

Cuban Santeria, also practiced in some Southern American cities with large Cuban populations, is similar to vodun, but has adopted many Christian symbols and rituals to create a syncretized and very much misunderstood religious practice.

What is most notable about these religions, which are far more organized than people might think, is that followers have a distinct relationship with

nature, both the seen and unseen. Vodun practices often involve animal sacrifice and ancestral worship, and even the “possession” of humans by deities during intense rituals. High on the list of beliefs is the power of fetishes and talismans both to heal and to harm. Mojo bags are magic charms wrapped in a cloth or animal skin bag, often red, tied with a drawstring. The bags can contain anything from magical rocks, animal feathers and claws, petitions to the deities and spirits, and even plant leaves. The Mojo inside the bag gives a person magical power, which is why Austin Powers was so upset when he lost his. Can you blame him? It’s not like you can just drop by your local Wal-Mart and pick up replacement Mojo.

Similar in intent, *Gris-Gris* is an amulet to protect the wearer from evil, or attract luck and fortune. This small cloth bag is filled with herbs, stones, bones, hair, and even grave dirt, emphasizing personal items of either the wearer, or the one intended to benefit from the contents. Gris-Gris is often used for negative purposes as well, usually to conjure or cast a curse or hex on someone. Often it is left on the victims’ doorstep so that they see it, and the reaction is often a slow death based upon the simple power of suggestion.

Thankfully, most vodun followers use their religion for good, but there are sorcerers called *Botono* or *Azetos* who cast hexes and curses to bring harm to enemies (one might call that defensive black magick!). One of their favorite tools for bringing about such harm is the voodoo doll, a poppit constructed out of crude materials and colorful cloth to represent the spirit of a particular person. Voodoo dolls can be constructed with household items and run the gamut from elaborately decorated and adorned, to basic and crudely fashioned. But the intent is the same: that what is done to the doll is done to the person it represents.

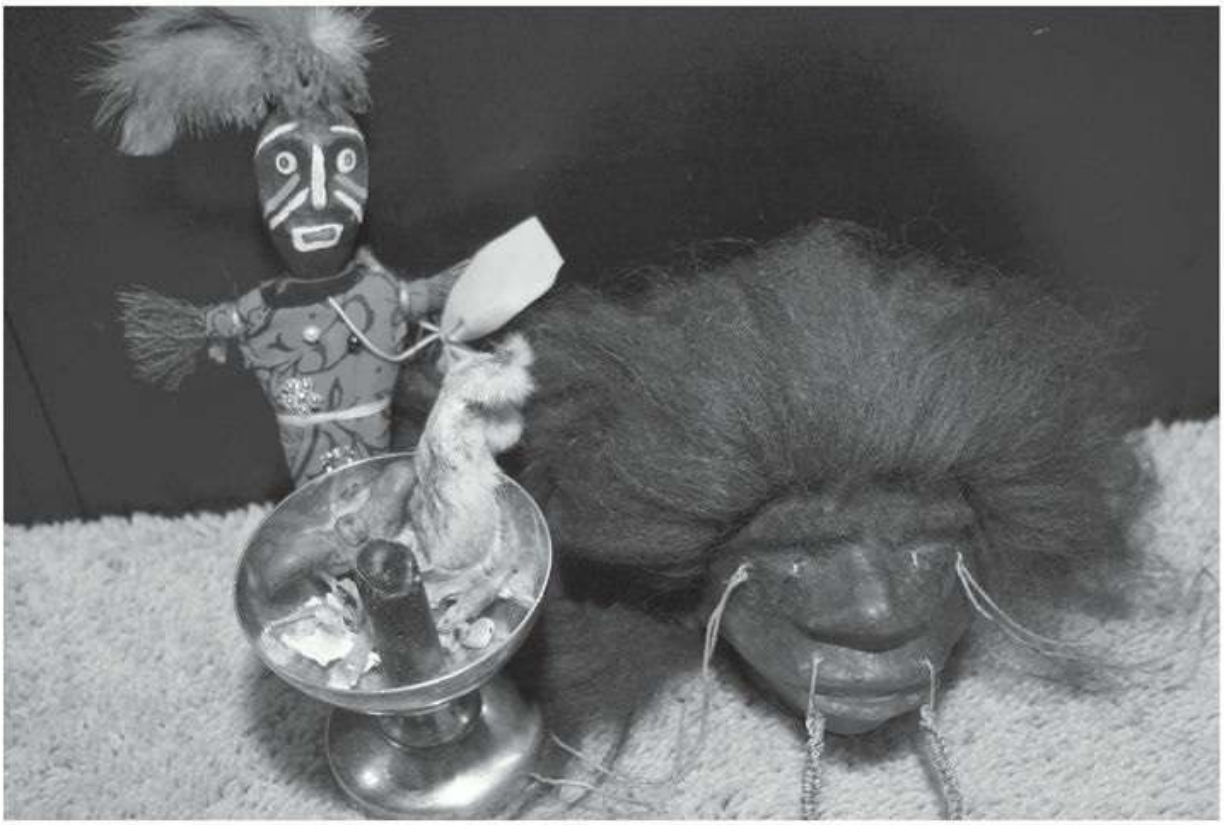
Dolls can be used in ritual to bring about good fortune. However, we tend to most often associate them with bad fortune. Pins are frequently used to bring harm to the person, who is usually aware of the situation and reacts accordingly. Placed in specific locations such as the heart or throat, the pins can bring about illness, disease, or worse. Poppits operate on the same principle, and are used in other folk magic traditions as well, including several forms of witchcraft. Again, the poppit represents a person and is used to cast spells, good or bad, upon that person. Some historians suggest that

poppits preceded voodoo dolls.

Some call these dolls effigies, although most effigies are actually full-length figures of a person—alive or dead. Effigies are often burned at political rallies (Marie is guilty of this in her younger years), but the original intent of a burning effigy was to banish the person from negative energies or spirits.

Worry Dolls, or Trouble Dolls, traditionally made in Guatemala, take a different perspective. Tiny dolls constructed of wood and cloth, these colorful dolls are often placed under pillows or “worried over” like rosary beads, and are typically used to help children heal from surgeries, as well as get over fears during the treatment of diseases. The doll is said to worry in the person’s place, allowing the person to rest, relax, and wake up with no worries. In the United States, Worry Dolls are very popular, but one has to wonder as to their efficiency, as the States remain one of the most stressed out countries on earth!

Figure 6.3 *Voodoo dolls, shrunken heads, and voodoo altar items all serve a purpose in ritual ceremonies centered on the power of belief. Image courtesy of Larry Flaxman.*



Again, it’s all in the intention of the one wielding the doll, poppit, or talisman, or kneeling before a cross with a statue of a crucified man, praying for forgiveness, or holding a prayer shawl, or beads, and letting it absorb the cares and concerns of the day. But can that intention, that focused belief, actually heal or kill? And is it the object or the mind of the victim or recipient that causes the physiological reactions often associated with fetish items?

Imagine having a curse put on you by a real, live warlock. That very thing reportedly happened to Cristiano Renaldo, a former Manchester United footballer and current star of the Real Madrid team. The warlock in question is a 58-year-old named Jose “Pepe” Ruiz. According to a September 30, 2009 Newstrack India story, Ruiz claims that he was “contracted” to cast a spell on Renaldo was intended to cause him serious injury. Real Madrid paid approximately 80 million pounds for Renaldo, but, if Ruiz has his way, the footballer will be sidelined more than on the field.

Of course, speculation ran rampant over who took out the “contract” for

the black magic. Was it a competing team? Renaldo's former manager? A disgruntled fan? As of the writing of this book, Renaldo is okay, and team Real Madrid dismissed the threat as nonsense.

Although this is certainly an amusing story, what if Renaldo bought in to the belief that this Ruiz guy really was a powerful practitioner of the dark arts, with the ability to curse someone into getting hurt? Would the footballer's own mind begin to actually make the curse happen, simply by thinking about, or trying to not think about, the curse? Would it become a self-fulfilling prophecy of sorts? We are all open to the thoughts and emotions of others, and those thoughts and emotions can do extensive damage in the form of verbal abuse, drama, and negativity. But if the football star begins to even hold the slightest notion that Ruiz had some special power, his mind could start to find proof of that power, and it might end up affecting his performance on the field. Only time will tell in this case, but sometimes curses can be injurious or even deadly due to the indirect consequences.

Aboriginal Australians have an interesting ritual of execution that utilizes a ceremonial bone called a Kundela or "death bone." Supposedly, if the Kundela is pointed at a person, usually someone condemned or cast out by the tribe, that person will die. The "pointing of the bone" is always done by a powerful member of the tribe, and is accompanied by a chant that is said to curse the recipient. Famous oddity hunter John Godwin describes on Trivia-Library.com his own experience witnessing a young Mailli tribesman who had been "pointed" waste away and die in a hospital, despite excellent medical care. The doctors could find nothing physically wrong with the tribesman, yet Godwin said: "He died before our eyes, in dreadful agony, apparently from the mere knowledge that he must die."

Figure 6.4 *Aboriginal death bone or kundela. Image courtesy of Larry Flaxman.*

Ancient Beliefs

Looking further back in time, the ancient Romans and Greeks had “curse tablets.” These tablets, upon which were inscribed curses and spells intended to influence others through supernatural means, were made of thin sheets of lead, and have been dated to the early fifth century BCE, having five distinct purposes:

1. To influence or curse competition, as in Roman chariot racing.
2. Political curses or litigation curses used prior to trials or to gain political favor.
3. Sex spells to draw a lover or curse a rejecter.
4. Trade curses to harm rival tradesman and diminish their businesses.
5. Justice prayers for seeking restitution.

These curse tablets were called *defixiones* and were found throughout the Greco-Roman world. The Greeks called the specific spells *katadesmos*, or “a binding.” This same concept of “binding” is found in the Latin *defixio*, or “to fasten.” As with any spell, even those utilized in ancient and modern forms of witchcraft, the act of writing it down and “fixing” it gave it power, just as

today we are taught by self-help gurus to write down our goals. Often the curse tablets would be inscribed only with the name of the person intended to receive the curse; however, by the fourth century CE, they began to become more intricate, with some including the names of various deities being called upon for assistance, as well as much more elaborate descriptions of the reason for the curse and the desire for revenge—or even a more positive restitution.

Interestingly, many curse tablets had nails driven through the lead sheet to signify the actual physical binding of the spell, just as needles or pins are driven into voodoo dolls to complete the intention.

Magical tools and ritual objects have been used in ancient witchcraft and modern Wicca for centuries, from wands and swords to cauldrons and athames charged with energy used to carry out spells (positive, that is!). These tools are said to hold power in them, but one must ask if the power comes from the belief that the tools are sacred and special. Think of the time-worn image of three old witches sitting around the bubbling cauldron. Can a bunch of stinky ingredients being stirred with a stick really cause someone to fall ill or find true love? And wouldn’t the person being charmed or cursed have to know about it in order for the spell to work?

Desire and intent may play a role in the manifestation of spells that are cast for good. Telling someone that you are putting a spell on them to find more love in their lives would no doubt feed into the subconscious, and change both the awareness and the perception of the person. Telling someone you are cursing them to death with a chicken bone because they stole your prized goat might also work toward its goal, if the person you are cursing is guilty and already struggling with their own inner demons about what they’ve done. Again, the power of the self-fulfilling prophecy may be more potent than the spell itself!

Figure 6.5

Figure 6.6 *From good luck charms, to occultsymbols, curses, and spells, we have a need to transfer intent into physical objects. Remember that rabbit's foot from childhood? Images courtesy of Larry Flaxman.*

Desire, then, clearly plays a factor in making good wishes, spells, and dreams come true, simply because the person doing the wishing will no doubt act on those desires. Fear does likewise in manifesting negative results of anxiety, worry, and eventually psychosomatic symptoms that, if the person is truly “weak in spirit,” could possibly kill. The self-fulfilling prophecy is often lurking behind the success of any kind of power of suggestion.

Sympathetic Magic

It is almost as if the mind becomes sympathetic to the spell or curse. The weaker or more unstable and afraid the mind, the more the spell or curse affects it. Sympathetic magic suggests that like attracts, and affects, like, and that everything is connected and linked on an invisible realm. Therefore, the act of sticking a pin in a doll is supposed to harm the person the doll represents, because what occurs in the symbolic sense has an outcome in the

empirical world. This idea is ancient, as represented in the primitive cave art of humans dressed as the animals they wanted to kill for food and fur, and in the wearing of antlers and horns before a great hunt. It is also present today when someone takes the wafer representing the body of Christ during Communion, or plays a lottery ticket with numbers that have personal meaning. I (Larry) have done the lottery ticket thing with personally significant numbers on a number of occasions and, unfortunately, have won zip, zero, and nada! And that was WITH my focused positive intentions!

Sympathetic magic is based upon two laws: the law of similarity and the law of contagion. The law of similarity suggests that an effect will closely resemble its own cause, whereas the law of contagion suggests that the connectedness of all things guarantees that once we come in contact with something or someone, we remain so. Guess what? That is science! It's called Entanglement. In the quantum world, if two particles come in contact with one another, they remain so even over vast spatial distances. They are able to affect one another. They remain connected. Einstein called this "spooky action at a distance," and some scientists theorize that this "communication" between the particles occurs using some mechanism that is faster than the speed of light.

A voodoo practitioner may use these laws to produce a desired effect by speaking it or imitating it. The contagion aspect occurs when another person "buys into" the whole situation and ends up manifesting the desired effect, as if the practitioner and patient were one and the same, connected by some unseen web or strand, sympathetic to the same intention between them.

Yet, traditional science has labeled sympathetic magic as pseudoscience simply because it cannot be proven or repeated in a controlled setting. Although not impossible to do so, it would require performing repeated and extensive tests with control groups who believe in, don't believe in, or don't know about the spell or curse being cast against them. Even then, the results could be entirely in the subjective realm, even if they did show signs of success. Magic may remain magic until somehow it becomes an objective part of our reality.

This belief in like-attracts-like magic remains part of our modern worldview that we have yet to shed, even as we shed the old skins of ancient

traditions and ideas that we feel no longer serve us (the earth being flat, for instance). Although intellectually we know that rubbing the smooth Buddha belly statue on our shelf won't make us rich, thin, or famous, we do it anyway. For luck. Just in case. Why not? And when we go about our day and good things happen, such as finding a 10-dollar bill on the sidewalk, don't we automatically attribute it to the shiny, fat tummy we caressed earlier (the Buddha's, not our spouse's)? Oh, and if we accidentally cross the path of the neighbor's black cat, then later get demoted at work, we blame it on the damn cat (and not our lousy job performance or the fact that we came in late and hung over more times than we want to remember).

Isn't this proof enough that it works?

The Creighton University Medical Center's Website on complimentary and alternative medicine (*http://AltMed.creighton.edu/*) features an interesting article titled "The Science of Voodoo," which discusses several scientific studies into the claims of voodoo as an effective healing modality. These studies were conducted to determine the validity of voodoo in a medical sense: whether voodoo relies on suggestibility alone for its placebo-like effects, or on the various herbs often used in rituals and their actual therapeutic and toxicological value. Studies included one for the Volume 42, Number 7, 2002 issue of *Headache: The Journal of Head and Face Pain*, which concluded that the improvement of symptoms in voodoo patients is mainly from placebo effects. By concurrently stimulating and inhibiting the nervous system, there appears to be an improvement of pain. The study author, Seymour Solomon, gives the example of someone drinking an herbal treatment over the body of a dead rabbit as both stimulation and inhibition of the nervous system, which may lead to relief. (Larry's note: Although this certainly is thought-provoking, drinking anything over a dead carcass sounds disgusting, and I would question the hygienic safety of such behavior. Marie's note to Larry: Don't knock it until you try it!)

Another cited study involved a case of a woman with metastatic melanoma who had received chemotherapy with a minimally positive response. The study, which appeared in the 2008 *Archives of Dermatology Journal*, was titled "Voodoo Medicine Still Going Strong: A Tale of Melanoma, Faith and Failure," and documented the patient's decision to pursue alternative medical

treatment in the Philippines, which appeared to work temporarily, until the woman died a few weeks later of advanced cancer. The study concluded that alternative treatments may complement standard Western medicine, but should not be pursued as the sole healing modality. Even though the patient might "believe" that she was cured, the end result showed otherwise.

Voodoo and other alternative healing modalities may be more "nocebo" than placebo. In voodoo practices, often the patient is cursed with negative intentions, and the nocebo effect is the result of experiencing a harmful outcome, because that is the outcome that the patient expects. It is not so much that spirits and demons are conferring the negative energy and sickness, as it is the mind of the believer. The mere expectation of illness or death appears to lead to illness and death in voodoo and other such belief systems.

This may be similar to a patient in a modern hospital who is told that they only have six weeks to live, and as a result they die exactly six weeks later. Yet we all know someone who has been given a death sentence by a practitioner of Western medicine, and outlived it by years—even decades. Is it dumb luck, or a focused and strong belief that one will live, despite what one is told by those in charge? This concept leads to another interesting aspect of curses and spells. The more powerful the one who is casting the curse or spell is perceived to be by the patient, the more powerful the patient will manifest the curse or spell. A village medicine man or voodoo priest will have more ability to mold the belief of the villagers than someone with less spiritual authority. Even in our culture, we tend to look up to and trust our doctors and surgeons, and if they pronounce us terminally ill, many of us may "believe" them far more than we would if the same diagnosis happened to come from a neighbor or stranger on a subway.

That is the basic conclusion of a study by Richard R. Bootzin and Elaine T. Bailey of the University of Arizona in their 2005 issue of the *Journal of Clinical Psychology*. Titled "Understanding placebo, nocebo, and iatrogenic treatment effects," the article looked at the positive and negative effects both placebo and nonplacebo (nocebo) treatments had on patients. The study determined that psychological factors, such as fear of a heart attack, can be a risk factor for death. Expecting sickness can lead to sickness, as stated earlier.

But of course the authors of the article called for additional, and much-needed, scientific study.

Voodoo, then, may work, because of the associated herbs often given to someone under siege by illness or even possession, which can be both positive or negative, depending on the spirit by which the person is believed to be possessed by—leading to the bigger question: *Do demons possess people, or do people possess demons?*) However, it may also work because of the placebo/nocebo effect. Or perhaps it is a combination of both. Certain herbs do indeed have some healing qualities when properly consumed, and most of us will agree, even without empirical proof, that our minds can make us happy or they can make us sick. (Just think how many times you've yelled at an obnoxious person, "You're making me sick!" Maybe it really isn't their bad behavior. It's "your brain on bad behavior" to blame!)

Home Remedies

An April 2009 article in *Psychology Today* discussed the "Upside of Voodoo" in relation to homeopathic remedies and placebos. According to the article, basically all post-op patients who receive sugar pills are 50 percent as likely to feel pain relief as those receiving real pain meds. Topical wart treatment can heal warts, but apparently so can colored water. The article author, Stephen Mason, MD, commented, "Indeed, with so many anthropological reports of Witch Doctors casting voodoo spells that kill, who could doubt the power of suggestion? Certainly not physicians!"

It seems there is an upside to lying to the patient by administering a placebo. But Mason also agrees that there is a downside, as in telling patients the truth. To what extent might a negative prognosis actually create a negative outcome? "The Witch Doctor can, after all, use his suggestive power to help or harm. How much damage is done when a patient is told to put his affairs in order by an authority figure in a white coat?" Mason refers to a UCLA study that concluded that the AIDS virus spreads four times as fast in patients who give up hope of controlling the disease.

The medical community has long believed that the placebo effect would be

effective in slightly less than a third of the cases in which it was utilized, but so many clinical studies have shown result rates us much higher, sometimes as high as 70 percent according to a *Clinical Psychology Review* paper documenting individual studies. UK-based science writer Helen Pilcher looked at both sides of the placebo coin in her widely disseminated article "The Science of Voodoo: When Mind Attacks Body," originally for the May 2009 *Scientific American Mind* magazine. Pilcher begins her discussion with a true life 80-year-old tale of an Alabama man, Vance Vanders, who had a run-in with a big bad voodoo daddy Witch Doctor who allegedly wafted a foul-smelling liquid in Vanders's face and told him that he would die.

Weeks later and near death, he was admitted to a local hospital. Doctors couldn't cure him, and were baffled by his symptoms. They had absolutely no clue what was wrong. One concerned doc, Drayton Doherty, confessed that he had lured the Witch Doctor back to the cemetery the night before and threatened to choke him until he coughed up the details of the curse. Doherty was told the Witch Doctor had put lizard eggs into Vanders's body, and that a reptile was eating him alive from the inside out. Doherty called a nurse and made her give Vanders a shot full of emetic, causing Vanders to vomit. During this ordeal, Doherty took out a green lizard he had stashed in his medical bag, showed it to Vanders, and said, "Look what has come out of you, Vance. The voodoo curse is lifted."

You can guess the ending. Vance lurched backward, then fell into deep sleep and woke up alert and hungry, and was discharged in a week, good as new.

This is a documented case, and one that had a good result. Unfortunately, many cursed people have actually died. Vanders got lucky, and had a very wise doctor to thank for it. Because if a mind can believe a curse, it can also "unbelieve" it. Pilcher goes on to discuss a more modern case of a man stricken with cancer who was given only a few months to live, and, yes, he died in months. However, there was just one slight problem. The autopsy showed he should not have died at all; his tumor was very small, and had not spread to other parts of the body. The poor man died because he was told he would, yet the actual diagnosis was a mistake. Clifton Meador, a doctor at the Vanderbilt School of Medicine in Nashville, Tennessee, summed it up

succinctly: “If everyone treats you as if you are dying, you buy into it. Everything in your whole being becomes about dying.”

This is the power of the nocebo at work. Pilcher also references a story about a man named Derek Adams, who tried to commit suicide after a particularly nasty break-up by taking all of his 29 remaining anti-depressant pills at once, resulting in a drop in blood pressure and a trip to the hospital emergency room. Turns out that Adams was part of a study involving an anti-depressant, but he was part of the control (placebo) group that took totally harmless pills! Once that little issue was cleared up, Adams cleared up, too, and was fully alert and had normal vital signs within 15 minutes of receiving the good news.

Some argue that if doctors could learn to choose their words carefully, some of these more dire cases may not happen. It may all be in the language and the attitude, and how they convey the diagnosis to the patient. But the onus of responsibility falls upon the patient, even if the patient doesn’t realize it. The mind that is playing the game is the patient’s own mind. No voodoo priest, Witch Doctor, or surgeon has the power to kill solely with words. The patient kills him- or herself with the belief in those words. And they can heal themselves just as well. Interestingly, hypnosis is one way to “unbelieve” a belief that one might die by changing the expectancies of the patient and ridding anxiety and associated stressors.

So the curse can be uncursed by the very same power used to place the curse. Suggestion. You will die. You will be well. It all depends on which statement your mind chooses to accept and believe. By breaking the cause, or the cycle of belief, we see the physical result—the effects—change. By instead believing that we are more powerful than the suggestions and thoughts of others, perhaps we block their bad Mojo from sneaking into our brains like a viral disease, infecting us until we fall to our demise—even when we were never really sick to begin with.

Believing in Believing

But how do we believe what we believe in anyway? As we stated earlier, some people will believe in anything. Thus, the popularity of celebrity gossip rag magazines and the duping of the public masses who watch “reality shows”! History tells us that every civilization has supernatural beliefs, whether in Gods and demons or magical powers of natural objects like stones and bird feathers. Religious belief is perhaps the most dominant, and some psychologists and evolutionary biologists believe that these beliefs may actually be hard-wired into our brain. The September 7, 2009, *Daily Mail* reported the findings of Bruce Hood, a professor of developmental psychology at Bristol University, indicating that “magical and supernatural beliefs are hardwired into our brains from birth, and that religions are therefore tapping into a powerful psychological force.” People may be preprogrammed to feel actual religious or spiritual feelings when specific parts of the brain are triggered or stimulated.

Some atheists challenge that religious belief is the result of poor education, poverty, and childhood indoctrination, but Hood’s studies suggest these beliefs come from a fundamental level and are not easily abandoned, which may explain the level of passion people display when defending their religious beliefs.

Evolutionary biologists point to the instinctual need for survival as a factor in the emergence of belief in the supernatural. Early *Homo sapiens* may have been aided by these beliefs on a survival level, such as the way we use the construction of narratives to help us explain and understand the disconnected world and events to which we are exposed. Mysterious events are often ascribed to gods when no other, more reasonable explanation is evident, and because early humans had little hard science to go by, the Universe must have appeared incredibly magical, foreign, and strange.

Neurotheologists, those in a field of science combining religion and neurology, see it a bit differently. Just as paranormal experiences and even mind anomalies involving memory can be pinpointed to activity occurring within the temporal lobe regions, religious belief may also lay dormant in this part of the brain. There have been studies conducted involving temporal lobe epilepsy and religious vision and experience. Neuroscientists point to a marked change in body chemistry and emotions in patients with temporal

lobe epilepsy when exposed to religious words and phrases.

More recent brain imaging studies have shown that the temporal lobe is not the only region to light up during religious experiences. Andrew Newberg of the University of Pennsylvania used single photon emission computer tomography, or SPECT, to take photos of the brain during religious experiences, showing the changes in blood flow to the brain at any given moment. Tibetan Buddhist monks were a part of one study. They meditated while Newberg injected radioactive dye through an IV line and then imaged their meditating brains. The result showed increased activity in the frontal lobe, the part of the brain dealing with concentration. But Newberg also observed the parietal lobe, which is responsible for our orientation to three-dimensional space around us. This part of the brain helps us figure out how far away objects are, our relationship to objects, and spatial location. This part of the brain showed decreased activity, suggesting that the meditating monks lost a sense of separateness in favor of a feeling of being one with the Universe, oft associated with Nirvana or religious ecstasy.

Newberg also found similar patterns with nuns who prayed during the study, including the loss of sense of self and an increase in the feeling of oneness. Imaging studies may suggest that religious experience is all the result of parts of the brain being activated, but it still does not truly answer the question as to what is activating it. Our thoughts? Perhaps it is the welcoming in of an outside power or source that then physiologically affects the brain, as well as our breathing rate, pulse, and blood pressure, all of which change during meditation and religious experience.

And by the way, even if the brain is hard-wired to believe in God, who, then, hard-wired it? God?

Obviously, many religious leaders don’t like the idea that it all comes down to the brain or the idea that we might be able to trigger our own mystical experiences by putting on a device that stimulates certain regions of the brain, similar to Dr. Michael Persinger’s God Helmet, which uses a series of electrodes designed to alter the electromagnetic field in the temporal lobe area, disrupting electrical pulses and causing the right brain to experience sensations of paranormal proportions. It might sound incredible, but we can put on a device and follow our bliss straight-away, see the face of God, or

visit with supernatural beings, all because a particular chunk of gray matter has been activated and influenced by external means.

But we can also see and experience things that we don't really want to see or experience that may be tied to deep subconscious fears that we don't even know we have. Devils, monsters, demons. And yes, the brain may be a factor in demonic possession. Studies involving epilepsy wrongly interpreted as voodoo possession show that during the "possession by spirits" a person might begin speaking in foreign tongues that they do not know, experience complex partial seizures and motor automatisms, and even lose awareness and consciousness. During such seizure/possessions, EEGs show right anterior temporal focus and atrophy of the right hippocampal region. This similarity with the cause/effects of epilepsy has suggested that demonic and voodoo possession may be related on a physiological level. Possession might be triggered by intense fear or emotion during ritual ceremonial practices, and past studies have shown that epilepsy can trigger intense religious experiences in some patients.

Have those in the psychiatric community investigated the possession phenomena from a scientific perspective? Absolutely, and modern psychiatry deems possession the result of specific neurochemical imbalances that affects one's perception of reality. But others believe that possession is the result of deep, repressed parts of the human psyche rising up to overtake the conscious ego periodically, as if the person experiencing the possession is suffering from multiple personality disorder. Carl Jung believed that demons and entities were unquestionably real, but not in a physical sense. To Jung, they were a "psychic reality" that lived in the lower mental states, rising up on occasion to challenge our awareness from the dark and murky depths of the unconscious mind.

If it is indeed all in the mind, then we have to include the subconscious mind in the equation, and because we barely understand the way our subconscious mind works, let alone what it might have the power to do, it becomes extremely difficult to argue with the man who insists that he will die because the bone of death was aimed his way, or the woman who says she was healed at Fatima because of her faith.

So how does either manifest into reality? Blind faith, maybe. Or perhaps a

construct of the deepest, most mysterious part of the mind itself, where anything and everything is both real and unreal—depending upon what you believe, of course.

Studies into the power of prayer to heal the sick and dying have shown mixed results. As far back as the 19th century, intercessory prayer, or prayer on behalf of the sick, has been a subject of intense debate. Sociologist Wendy Cadge, who is an expert on religion, and medicine, began researching intercessory prayer back in the mid-1960s and has put her years of studies into a book, *Paging God: Religion in the Halls of Medicine*. For the book, Cadge evaluated 18 published studies conducted between the years of 1965 and 2006, documenting the evolution of medicine and religion and detailing how the two have changed through the decades.

The studies run the gamut from Protestant prayer, to Christian, Buddhist, and Jewish prayer. According to the research data, some studies showed that prayer did appear to be effective; other studies showed the exact opposite. According to Cadge, some of the problems in these studies occur in the protocol, suggesting that double-blind testing may not be effective in these types of clinical trials. As always, the argument can be made that prayer is totally subjective, and the effectiveness of prayer can also depend on whether or not the patient was cognizant and aware of the fact that they were being prayed for.

If someone knows they are being prayed for, could that knowledge alone help them to heal? Certainly that might present a slight problem for those trying to prove that the power is in the prayer itself, or the energy coming from those praying, and not in the mind of the person being prayed for. The only way to disprove this correlation would be to conduct intensive and repeated studies involving patients who had no idea they were being prayed for, or, perhaps, even told they were not being prayed for. If prayer has some kind of exterior influence, it should not matter if the patient knew about it or not. Just as if someone puts a voodoo curse, hex, or spell on a villager, the villager would only succumb to the curse if the curse had the power—and there is plenty of “circumstantial evidence” to show that this is not what happens.

Again it comes down to the mind of the patient, subject, or victim of a

prayer, spell, or curse. That seems to be where any magic occurs, whether the magic is intended to heal or kill, and not in some outer force that is put into action via a chant, a pointed bone, or a group of nuns praying in a convent far, far away. Surely there are cases of someone being prayed for that was unaware of the generosity of spirit of others who did heal or live another day. But we cannot empirically prove that it was the prayer alone that was solely responsible, the body naturally healing itself, or if it was the patient's own mind deciding that it wanted to heal.

David R. Hodge, assistant professor at the College of Human Services at Arizona State University, is a leading expert in spirituality and religion. In a March 2007 interview for *ScienceDaily*, he discussed the studies that he has conducted into intercessory prayer. His conclusion was that some work, and some don't. His work, published in the March 2007 issue of the *Research on Social Work Practice*, noted that more research was warranted, as some of the studies did find a distinct correlation between prayer and improved health. "Overall, the meta-analysis indicates that prayer is effective. Is it effective enough to meet the standards of the American Pyschological Association's Divison 12 for empirically validated interventions? No."

Hodge does suggest that prayer can be an effective part of treatment that includes standard treatments as well, but stresses that it should not be used alone. On the other hand, another *ScienceDaily* article from April 2006 found that prayer not only doesn't seem to help heart surgery patients, but it might also make them worse! The study, called STEP (for Study of the Therapeutic Effects of Intercessory Prayer), looked at patients undergoing coronary artery bypass surgery that was comprised of individuals who had little or no religious faith. The 1,802 participants were put in three groups of 600 each. One group received no prayers. The second group received prayers after being told they may or may not be prayed for. The third group was told they would be prayed for starting the night before surgery and for the next 14 days. The prayers were basic, asking for successful surgery and a quick and healthy recovery.

The results were absolutely stunning. The group that knew they were being prayed for suffered more complications than the other two groups. Deaths during the first 30 days after surgery were too close to call, with just as many

in the groups being told they were prayed for as those who did not know. Researchers had no clear explanation for why people who knew they were being prayed for would suffer even more than those who did not, and, of course, this called for further studies. One possible explanation that does make sense is that those individuals who knew they were being prayed for may have realized the gravity of their condition, and subsequently "willed" themselves worse.

Too many factors come into play in determining the power of prayer or curses to be effective. The person at the receiving end seems to be the biggest factor of all. Do they believe? Do they accept their fate, good or bad? Are their minds strong enough to "unbelieve" negative input? Is the subconscious in charge, thus no matter what they think they believe is null and void?

Mind over matter, or mind over other minds—it may all be up to each of us as individuals as to the amount of control that we give to outside thoughts, forces, and beliefs that could hurt or harm us.

As our children often like to remind us, "No one is the boss of me."

Chapter 7

MIND TRIPS AND TIME SLIPS

Man...can go up against gravitation in a balloon, and why should he not hope that ultimately he may be able to stop or accelerate his drift along the Time-Dimension, or even turn about and travel the other way.

—H.G.Wells, The Time Machine

Once confined to fantasy and science fiction, time travel is now simply an engineering problem.

—Michio Kaku, Wired magazine, August 2003

Events in our lives happen in a sequence in time, but in their significance to ourselves they find their own order the continuous thread of revelation.

—Eudora Welty

Can the mind transcend the body? Can the mind transcend time? And most importantly, can the mind transcend death?

For anyone who has experienced an out-of-body experience, or OBE (sometimes referred to as astral travel), there is certainty that the mind can indeed leave the body, sometimes at will, and move about the landscape of the world. Oh, and not just this world, but others that only exist when the physicality of life slides over to the passenger seat and consciousness is permitted to take the wheel.

An OBE can occur at any time, and to anyone. Think of those moments of intense day dreaming when the sense of having a physical body dissipates and the mind enters a state of focused imagination. Some call day dreaming

an utter waste of time, but recent research suggests that there may be more to "zoning out" than first thought.

A 2009 study at the University of British Columbia (UBC) used functional magnetic resonance imaging (fMRI) scanners to examine the brains of study participants who were asked to perform a simple, routine task while their brain activity was monitored. The most recent belief was that the brain had a "default network" that kicked into gear when a set point of boredom was reached, usually during tasks defined as rote, easy, and uninteresting. This default network was thought to be the only part of the brain at work during day dreaming episodes. But the UBC study showed something far different, and far more interesting. The fMRI scans indicated that the brain's "executive network," associated with complex thought and problem-solving also became active. And, the less the subject was aware that he or she was day dreaming, the more these two networks "lit up" on the scanners.

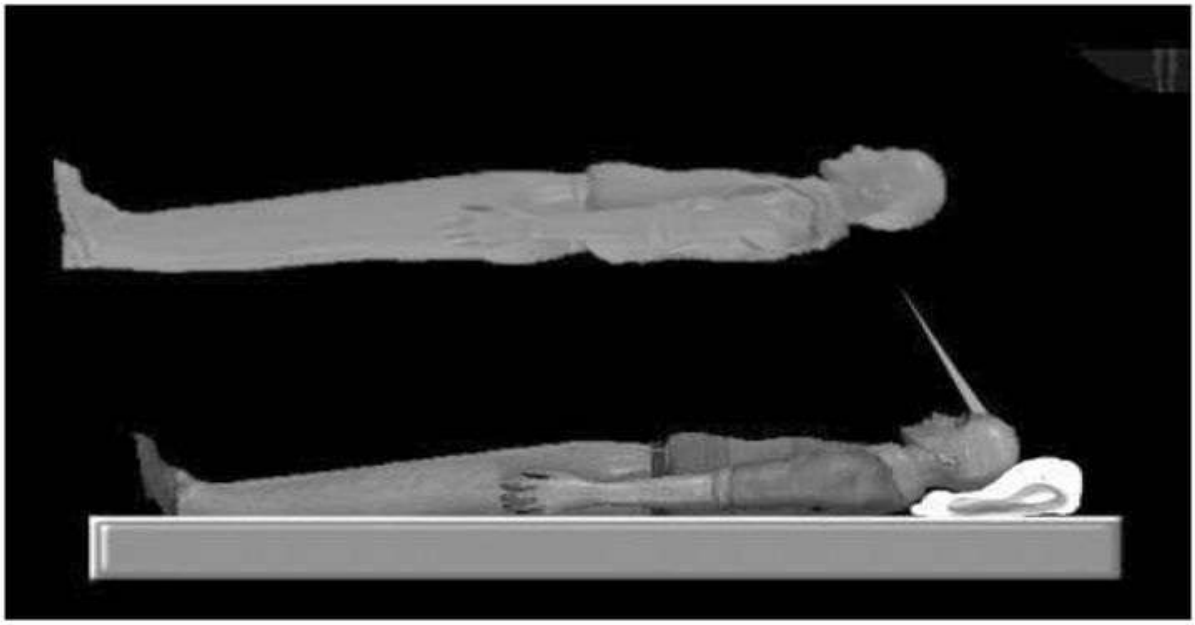
A similar study conducted at Dartmouth College in 2006 corroborated this data, adding that not all minds wander the same, and that those subjects who had more blood flow to the default network of the brain reported more day dreaming.

The findings suggest that day dreaming is actually a cognitive state in which the mind can venture off and examine important life questions or issues, even as the body does its rote work. The body stays in a continued alert stage as it must to safely complete its task. This phenomenon is most often seen when we are driving long distances and seem to lose sense of time and physicality. Upon arriving safely, many often wonder how they didn't manage to kill anyone on the freeway while daydreaming about that tropical island that they hope to purchase one day.

Leaving the physical body and traveling off away from it, with a distinct sense of leaving the body behind, constitutes an OBE. The traveler, so to speak, sees the body below as he or she rises above and moves about into the astral field. In this state, the mind can often appear to take on superhuman powers like moving through walls, flying over oceans, and visiting dead loved ones in other realms. These experiences are much more than simple dreams; they often seem as real as waking or dream states do, and usually involve some lucidity, although many people have reported OBEs that they

seemed to have little or no control over.

Figure 7.1 *The mind travels as the body remains inert, left behind, connected only by a silver chord. Image courtesy of Wikimedia Commons.*



OBEs

The term *out-of-body* was allegedly coined in the 1940s by G.N.M. Tyrrell in his book *Apparitions*. Later, the term was often referred to as astral projection and astral travel by those of a more metaphysical bent. Many experiencers, or travelers, can “will” themselves into experiencing an OBE, but often they occur as a result of trauma, drug use, or extreme mental stressors. This feeling of leaving the physical body can even be induced during meditation, focused visualization, or via the use of binaural beats to entrain the brain to step into that in-between state of sleep and wakefulness. Some individuals have reported experiencing OBEs that feel like their whole body is paralyzed. One could only imagine the sense of shock when the

traveler looks down and sees his or her lifeless inert form beneath them.

Scientists and neurologists liken OBEs to virtual reality experiences, citing possible connections involving visual and tactile signals misfiring. Interestingly, studies have shown that virtual reality machines can provide one with the sense of being outside their body, moving around and exploring, but to those who experience OBEs at will, their experiences go far beyond the virtual. They truly believe they are real, and not an illusion created by particular brain functions going awry. Beyond virtual reality experiments, OBE experiences have been artificially induced by direct stimulation of the right temporal-parietal junction of the brain. These experiences may not have the clarity that many OBErs state during their experiences, which strongly suggests that other aspects of the brain or consciousness may be involved.

Other scientific studies suggest that, during the immobilization of the body stage of the experience, we lose contact with tactile sensory input from the body,. However, somehow retain perception that is beyond the five senses. Others link OBEs with conditions of maximum physical and mental arousal, such as childbirth, a traumatic accident, or medical event such as cardiac arrest. One such study, reported in the *Lancet* in 2001, involved 344 patients who were resuscitated after suffering cardiac arrest. Of these, 18 percent reported a near-death experience (more on those soon) and many of those experiences included out-of-body awareness.

The stages of a classic OBE involve the following:

- Conscious withdrawal from physical activity and environment. Attention turns inward, and the body goes into an autopilot mode.
- A cataleptic/paralysis stage where the body is immobile. Sensory information may occur, including bright lights, humming noises, vibration, or “buzzing” feelings in the head or body.
- Separation of perception from the physical body. A strong sense of being pulled away from the body is experienced.
- Free movement. This is where the “astral travel” actually begins, with the mind moving beyond the body, attached often by a thin visible white or silver cord. Depending on the intensity of lucidity, the traveler may have a sense of exceptional clarity and focus.
- Re-entry. The traveler often “knows” it should return to the body

> intuitively, and does so, sometimes rather quickly, often accompanied by a feeling of “snapping” or “popping” back into the body. This may feel like the stage between sleep and waking states, but the traveler knows he or she has *not* been dreaming.

Although OBEs may have a simple physiological explanation, astral projection and travel get a bit more complicated. Once travel in the astral plane begins, it seems that anything goes. OBE travelers report fantastic journeys through non-physical planes where only the spirit body can go. Preston Dennett, author of *Out-Of-Body Exploring: A Beginner’s Approach*, documents his OBE travels 20 years ago in an attempt to connect with his deceased mother. He had hundreds of experiences varying in duration from a few seconds to hours, and eventually learned to experiment, and even control, aspects of his travel. Although skeptics will argue that nothing ever left Dennett’s body during his travels, Dennett himself felt the clarity and “reality” of these experiences, and, although purely subjective, they felt as if they were simply another level of reality that anyone can experience with some practice.

Dennett’s experiences include many common themes found throughout other astral travel reports, including the presence of a Higher Power or Light, contact with spirit guides, access to the Akashic Records, and even time travel! Astral travelers report everything from the ability to meet with other travelers to communication with angels and dead relatives to sex on the astral plane! Other reports include a variety of non-human life forms different from anything seen on the Earth, from elves and trolls to goblins and fairies.

Dr. Bruce Goldberg writes in *Exploring the Fifth Dimension: Parallel Universes, Teleportation and Out-of-Body Travel* of his experiences with OBEs, suggesting that “when beyond the physical body, there are no physical laws as we know on the Earth plane. All time is simultaneous, so that you can view any past, present, or future activity on the physical plane.” OBE travel not only discounts our traditional ideas of linear time, but even our belief that there is only a three-dimensional reality: the one we are living in.

Goldberg posits that beyond the fourth dimension of time, there is a fifth dimension, consisting of a basic framework of structures that include the Lower Five Planes, the Soul Plane, and the Seven Higher Planes. The Lower

Five consist of the physical, astral, causal, mental, and etheric planes, and are focused on the thoughts and actions of the soul, the lessons to be learned, and any karmic debts to be incurred or eliminated. The soul plane is the in-between zone where the Higher Self resides, as well as Masters, Guides, and departed loved ones ready to communicate advice and guidance via telepathy. The Seven Higher Planes is the realm of connection with God, the Source, the One, and supposedly can only be accessed once all karmic debt has been paid and the karmic cycle transcended.

Whether or not these planes exist, the sheer variety of experiences reported suggests realms rich with visual and sensory images that look, sound, feel, smell, and taste as real as anything that can be found on the good old Earth plane.

Another long-time astral traveler, Robert Bruce, writes about his lifelong journeys into the subtle dimensions beyond our own in the classic *Astral Dynamics: The Complete Book of Out-Of-Body Experiences*. With more than 25 years of experience to gather from, Bruce has written the virtual bible of all things OBE. In the revised 2009 edition, Bruce posits his theory of a "projectable double" that leaves the physical body during an OBE. According to his theory, when this happens, the mind splits into copies that operate simultaneously. These copies consist of the physical body/mind, the projected body/mind, and the dream body/mind. Understanding how these body/minds work can help someone to have a successful OBE.

Unlike OBE research of old, where it was suggested that the mind leaves the body, leaving behind nothing but a physical shell to lie there and wait for its mind to return, Bruce goes beyond the "empty-body assumption" to the possibility of a split mind, where both minds retain some memory of the experience. "Most people have enough trouble grasping the concept of a single astral double being projected outside the physical body, let alone grasping that there can be multiple copies of a single mind existing simultaneously. But, this is essentially what happened during an OBE."

Bruce discovered the mind-split effect during one particularly powerful OBE and later verified it with additional experiences. The process involves the physical body retaining the "master copy" of the mind and memory and spirit, even during the OBE. When the physical body falls asleep, it enters the

“mind awake + body asleep” phase where consciousness is then reflected into “the internal expanded subtle energy body.” This new body contains a full copy of mind and memory. During sleep, another aspect appears called the “dream mind,” and at some point it begins dreaming.

The expanded subtle energy body is what generates the “real-time projectable double” that does the traveling. Again, a full copy of mind and memory is reflected into the double. At the precise moment when the real-time body projects and separates from the physical, the first mind-split occurs, and the real-time projected double goes on as a “discrete entity.” The three copies of mind and memory or a single consciousness then exist in the:

1. Physical body/mind (master copy).
2. Dream mind (internal mind-split aspect).
3. Real-time projected double (first external mind-split).

All three remain interconnected, yet can also function independently. Additional copies of consciousness can then be created to reflect into higher and higher dimensions.

The purpose of all of this is to “allow the essential animating spirit to strip away coarser layers of matter and consciousness that hold it within the physical body.” Consciousness, or the animating spirit, is then free to travel about the higher dimensional levels and even touch the Source, all while the body sleeps.

The mind-split effect may explain some of the more anomalous aspects of OBEs, such as the presence of dual or shadow memories of both the projected double and the physical body laying below at rest. Bruce describes these as perceptual crossovers that occur through the “energy cords” connecting the physical body/mind to the projected double.

Similar to Goldberg, Bruce also agrees that there are separate dimensional levels that the traveler can access, with the Real-Time Zone the first level that new OBE travelers generally enter, a sort of buffer zone for further and higher dimensional travels. He also posits that the astral planes are divided into seven levels, each of which contains many additional internal realms. This dimension is closest to the physical universe, and Bruce states, “the contents of the physical universe reflect into the astral dimension, and that the

astral dimension reflects into the physical universe." The flow of energy contained here is part of the process of how thoughts and intentions become manifested.

We would be remiss in our duties if we did not mention the vast body of work into OBEs by Robert Monroe, who is the author of many books, including his 1971 classic, *Journeys Out of the Body*, and founder of the Monroe Institute. Monroe is considered a pioneer in consciousness and OBE research, and his institute conducts ongoing research and studies into the evolution of human consciousness. His research is based upon his own experiments with "sleep learning" in the 1950s, and led to the writing of his classic book, as well as two more books that continue his exploration into OBEs and human consciousness. Monroe also registered a number of patents for contraptions that utilize binaural beats to stimulate brain function and synchronize brain hemispheres.

Although the Monroe Institute was one of the first facilities to begin the teaching of methods to expand human potential and consciousness, it is not the only institute devoted to OBE research. The Projectarium is described as a "elfexperimentation laboratory of the International Academy of Consciousness." Nestled among 25 acres of cork and oak tree groves near the town of Évoramonte in the Alentejo region of Portugal, this center is, according to their Website, a hub for those conducting consciousness research using traditional and multidimensional approaches, including formal researchers and the general public.

The Projectarium consists of a main building with monitoring and a reception area that is connected to an igloo-shaped building designed to facilitate out-of-body experiences and conscious projection. This structure is certainly an unusual shape, and is said to be the first of its kind in the world, but shh—don't tell that to the Eskimos! Inaugurated in November of 2006, the Projectarium is one of many research buildings located on the IAC campus, all devoted to exploring inner consciousness and multidimensional awareness.

Traveling out of the body while alive definitely sounds exciting and intriguing, but what happens to the essence, or mind, at the end of the journey of life? For those who have died and lived to tell about it, the experience is

one that proves to them without a shadow of a doubt the existence of a separate consciousness from the physical body.

Near-Death Experiences

Near-death experiences or NDEs ask the ultimate question about the separation of brain and mind/consciousness. When we die, our physical bodies cease to function, and if we buy into the theory that the mind is nothing but a part of the brain's infrastructure, then our minds would cease to function, too. So would consciousness. Yet thousands of reports from individuals spanning all walks of life, and from all geographic regions of the world, suggest that perhaps there is something that lives on, maybe even for all eternity.

The typical NDE follows a routine progression of stages first suggested by psychologist, doctor, and author Dr. Raymond Moody, Jr. Considered the "founding father" of NDE research, Moody coined the term back in 1975. He worked with more than 150 people who had clinically died to come up with the stages of an NDE, which he wrote about in his books. His most famous book to date, *Life After Life*, became an award-winning film.

The stages are:

1. Hearing the pronouncement of death, such as "We lost him" or "She is dead" or, for those Trekkies, "He's dead, Jim."
2. The noise: an auditory sensation experienced as the person leaves their physical body, often described as a buzzing, clicking, or banging sound. Many associate this sound with the sensation of movement through space or of deep peace and calm.
3. The sensation of traveling through a dark tunnel often at a very high rate of speed. The person feels drawn through the tunnel by some unseen force.
4. The sensation of being out of the body, rising upward, perhaps into a heaven-like state.
5. Meeting dead loved ones, guides, and relatives, either in the tunnel or

near its end. These are often attributed to loving and helpful people, such as guardian spirits or angels.

6. Seeing a “being of light,” a Godlike spiritual being, or Higher Self that shines with an unearthly brilliance.
7. The Godlike being helps the person go through a life review of snapshots of events, with more time being given to important life events. This stage moves quickly, and ends with a sense of understanding or knowing, and an overwhelming feeling of compassion and love for others.
8. Realizing it is time to go back and continue to live. Often the person is reluctant to go back, but must.
9. The return into the body and the return to life.
10. Making changes that reflect a newfound joy and appreciation for life.

Although not all of these stages occur for everyone, they do occur with enough regularity to create a common template by which NDE research is conducted using the subjective stories of people, while at the same time trying to understand what goes on in the brain during each stage.

From his research with thousands of these NDE patients, Moody became convinced that there is life after death. Thankfully, his work continues at the Dr. John Dee Memorial Theater of the Mind in Alabama, which conducts research into consciousness and NDEs. Moody’s work inspired dozens of other scientists and researchers, not to mention hundreds of books about life after death and the NDE enigma.

In terms of what actually happens to the patient, there is significant controversy. The murky debate revolves around the fact that science has yet to prove if consciousness exists outside of the brain in the first place—let alone if it can continue to exist when brain activity has ceased. If consciousness is not localized to the brain or inside the skull, perhaps it may function more like a radio receiver—receiving radios wave that comes from somewhere else, yet are able to be “heard” and processed in a manner that is similar to an actual physical radio. Circumstantial evidence in the form of thousands of NDE reports suggests that consciousness remains and moves on, but circumstantial evidence is not empirical proof.

Temporal lobe epilepsy has been linked to NDE-like phenomena, as has déjà vu. The neurological connection implies that anyone can be stimulated into having such an experience, as Dr. Michael Persinger did with his God Helmet. If consciousness and the "mind" exist solely within the brain, then when the body dies, so too must consciousness and mind. Nothing survives. Nothing lives on.

There have been legitimate scientific explanations posited regarding NDEs. Some of the more popular ones are:

- **THE DYING BRAIN THEORY**—Introduced in the book *Dying to Live* by Dr. Susan Blackmore. This theory suggests that the common elements of NDEs point to nothing more than the function of a dying brain when neurotransmitters are shutting down.
- **HALLUCINATION THEORY**—Also suggests that brain functions alone are involved. Upon death, the theory posits, endorphins are secreted in the brain, and they act upon the nervous system to create a sort of "high" or feeling of elation. This may also be achieved with ketamine, an anesthetic produced naturally in the brain, or even LSD, as psychology professor Dr. Ronald Siegel at UCLA found out when he gave volunteer subjects the drug. Many reported NDE-like experiences.
- **TEMPORAL LOBE STIMULATION**—That old temporal lobe again, responsible for all kinds of strange and mystical experiences when activated or stimulated electrically. One suggestion is that the extreme fear of dying stimulates the lobe and results in an NDE. Interestingly, people who have experienced strokes that have damaged the temporal lobe report less NDEs.
- **OXYGEN LOSS THEORY**—When the brain is deprived of oxygen, it may produce NDE and hallucinations.
- **BIRTH MEMORY THEORY**—We may be reliving the moment of birth. Womb memories involve traveling down a dark tunnel into the light and meeting loved ones upon arrival. Perhaps at death, we are actually reborn!

There are numerous other theories; however, none of them really succeed in fully explaining all of the elements of NDEs. Also, we must ask, do we

ignore the millions of experiences reported of ghosts and communication with the dead as just fringe fluff? Or are these experiences further circumstantial evidence for the possibility (or even likelihood) that there is a part of us that does not cease to exist upon corporeal passing? One of the most intriguing theories comes from Anthony Peake, researcher and author of *The Daemon: A Guide to Your Extraordinary Secret Self*. Peake, who has done extensive research into déjà vu and NDEs, posits a different option to the war between those who believe these experiences exist only in the brain, and those who see more to the story. His theory bridges the gap between subjective experience and scientific/empirical evidence by first agreeing that the body does die and does not come back. However, he does not believe in disembodied life after death. Peake suggests that there may be a third option here. This "final answer" allows for the possibility that we do continue to exist after physical death—just not in the usual sense of hanging around the world we once lived in, say as a ghost, spirit, or even consciousness.

Many-Worlds Interpretation

This theory is based upon the Many-Worlds Interpretation first proposed by physicist Hugh Everett III in the 1950s. This is an extremely complex theory of quantum mechanics, and *The Stanford Encyclopedia of Philosophy* offers one of the best and most understandable descriptions of it: "The Many-Worlds Interpretation (MWI) is an approach to quantum mechanics according to which, in addition to the world we are aware of directly, there are many other similar worlds, which exist in parallel at the same space and time. The existence of the other worlds makes it possible to remove randomness and action at a distance from quantum theory and thus from all physics."

The idea, then, in vastly simplified terms, is that we exist in parallel universes and that, because we cease to exist in one, does not mean we cease to exist in all of them. Peake proposes that perhaps just before brain death occurs, we fall out of the "quantum time line" of the universe we are in now, release the life option of this universe, and then fall into the time line of a parallel universe. To those on the outside, you appear to be dead. The falling out/falling in is not an observable action, but it is an action that every human

will go through when it is their turn to die. Once settled in the new universe, you live out your new life with the same clarity, immediacy, and relevancy as the one you left, never aware of the switch at all.

Peake takes this one step further by introducing the concept of a split brain, where the two hemispheres of the brain create their own unique and separate consciousnesses. These consciousnesses are able to interact with one another. The left hemisphere is responsible for the more dominant "I" personality that controls speech, action, and rationalism, which he calls the *Eidolon*, or "lower self," and the right hemisphere acts as the intuitive, emotional, and empathic personality, called the *Daemon*, or "higher self." The *Daemon* has a much wider and broader perspective of reality and time, and is able to access past, present, and future memories. In fact, during a déjà vu experience, it is the *Daemon* that precognises what will come, resulting in something akin to a gut instinct in the *Eidolon* (if you are paying attention to the whispers of the *Daemon*, that is). That gut instinct can then be applied to problem-solving and decision-making. This is a perfect example of the two brains working in tandem. Perhaps this is what is occurring during lucid dreaming, out-of-body experiences, and other altered states of consciousness.

Peake states that it is the *Daemon* that experiences deeper realities and mystical experiences. We know that the right brain is the realm of imagination and creativity, both of which often involve "inspiration" from a higher source. Maybe it's the *Daemon* coming up with all those great ideas and inventions!

No matter who is correct, most humans strongly believe in the concept of life after death. A recent Gallup poll finds that more than 70 percent of Americans believe in life after death, with slightly lower rates being reported from other countries. For those who believe, the theories don't matter much, and to those who have experienced an NDE, they matter even less. And for those who don't believe in it at all, they can still find some peace in the possibility that even if it is only a construct of the dying brain trying to make the end a bit easier and nicer, it is still a pleasant idea that we don't just black out and cease to be. There is a transition experience of sorts, one that perhaps is intended to ease us into the void.

Shared Death Experiences

To make matters even more intriguing, there are many reports of Shared Death Experiences involving people who are not directly near death, but in close proximity to those who are. Dr. Raymond Moody documented several such cases, suggesting that people who are emotionally involved in the dying person's life can experience the NDE process as if they themselves are making their own transition from life to death. In many reports, the loved one is neither physically nor geographically close to the dying person however, they still report having the reactive experience. And this is not limited to just one loved one. Groups of people have had Shared Death Experiences, all sharing the same visions at the same time, and even at the same location.

One study done by Glennys Howarth of the University of Bath, England, and Allan Kellehear of La Trobe University in Melbourne, Australia, examined the shared experiences of caregivers and loved ones close to the dying patient. The report, "Shared Near-Death and Related Illness Experiences: Steps on an Unscheduled Journey," was published in the December 2001 issue of the *Journal of Near-Death Studies* and concluded that "the processes that these people undergo in the search for explanations is similar in most respects to those at the center of near-death and other related illness experiences."

Often, the loved ones of the dying patient may just have a shared vision, without the accompanying stages of a classic NDE. These Shared Deathbed Visions (or SDEs) can be of a bright white light or a celestial being, and might also involve deceased loved ones awaiting the dying patient on the "other side." Dr. P.M.H. Atwater, PhD, author of *Coming Back to Life* and *Beyond the Light*, reports that in her own research with SDEs, several people may be having the same visions and may or may not be aware of the others during the NDE, but later discover that they all had the same experience. She also found that this happens often with people who are in the same traumatic accident, or located in the same wing of a particular hospital at the same time.

Atwater classifies NDEs into four categories, which differ slightly from Moody's classifications. She applied her decades of hands-on research with NDE patients to come up with these categories, which she discussed in more

detail in *Beyond the Light*.

- **INITIAL EXPERIENCE**—Described as an OBE where a presence is discerned—a friendly, loving sense in the darkness, a sort of precursor to the actual NDE that allows the person to open up to other realities.
- **HELL-LIKE EXPERIENCES**—Sensed as a threatening black void or purgatory state, a ghost of the past, numb indifference. Often related to the person's own guilt, shame, rage, or fear, or to those who believe they will be punished or judged after death.
- **HEAVEN-LIKE EXPERIENCES**—Involve loving light beings, guardians, religious figures, and deceased loved ones that validate how loved the person was and how important they were in the world. This is a positive validation of life as opposed to the Hell-like Experience.
- **TRANSCENDENT EXPERIENCE**—The person experiences other realities, other realms, and great collective truths. These seem to occur to those who already had an open mind and embraced these said-same possibilities while alive.

All of these experiences can occur at the same time, according to Atwater, who bases the findings upon her collective database of more than 3,000 NDE reports. The common elements of NDE can be found throughout these reports, as well as individuations that may be based upon the person's own religious or spiritual beliefs, or what life experiences they may have repressed, such as rape or abuse. For instance, those of a Christian persuasion might see Jesus as the Light Being in their NDE, where perhaps an atheist might see just a beloved dead relative aglow approaching them as they exit the dark tunnel. Someone who has attempted suicide may see a devil-like being, a manifestation of their own personal guilt, shame, and expectations of being punished for their sin. Personal preference, belief, and perception can indeed play a role in the interpretation the experiencer gives to their NDE once they have been resuscitated.

Thus, NDEs can (and often do) have individual variations, but the common elements reported time and time again are fascinating and certainly beg for further research before passing these experiences off as nothing more than a

brain reaction to death, a biological function that has no meaning. To these who die and live to tell about it, the NDE is so much more. It is a window into a world in which, one day, we will all enter, and a reminder that life, in some form, goes on. It is a knowing that they carry back with them into the world of the living a feeling of transformation and change that can only be understood by those who have been fortunate enough to glimpse what lies beyond the veil of our alleged mortality.

Time

One of the more complex commonalities between OBEs, déjà vu, and NDEs is the concept and perception of time. Those who experience these events often report the slowing down or speeding up of time, sometimes even at will. In his book *There is Life After Death*, author Roy Abraham Varghese states that most NDEs likely occur outside of the space/time framework so familiar to us in our daily lives, or at least not the one we understand. He points to reports of people in an NDE often being able to speed up time, arrive at a location nearly instantaneously, and even move through space in ways that defy our current understanding of the laws of physics and energy. To us, time moves us forward through the three-dimensional landscape. We measure time by the rate of regular changes, like the ticking of a clock that passes away the hours. But get clocks moving at the speed of light, and time will cease to exist at all, making the idea of a clock wholly irrelevant.

Our brains comprehend linear time, in order to make sense of our lives. But it is only our experience that senses the flow of time from the past, into the present, and beyond to the future. Physics suggests that it all exists at once. Outside of our linear time, there is no real past, present, or future. One way to escape the clutches of linear time is through altered states of consciousness, OBEs, lucid dreams, and NDEs (not that you want to induce an NDE!). But we also experience shifts in our perception of time during specific events, such as extreme boredom, or extreme duress.

Law enforcement officers, soldiers in combat, and even martial artist

experts all experience a sense of time slowing down, called “Tachi Psychi,” which is the speeding up of both the visual processing centers, and the accelerated triggering of the motor control functions. This happens when someone is under adrenal stress, when the release of adrenaline into the brain and bloodstream occurs, most often during a “fight or flight” situation. The stress frequently causes the loss of fine motor control and loss of access to the self-aware “non-adrenal” mind, and often leads the individuals to experience both tunnel vision and auditory exclusion.

These combined effects are common in combat situations or when a police officer is involved in a shoot-out. Time appears to slow down, and things happen without thinking about them while the body shuts down certain body functions in a subconscious attempt to enhance the functions necessary for survival. An example of this would be the victim of an armed robbery reporting to police that the suspect was carrying a “gigantic gun.” The gun was likely no bigger than most standard-sized handguns, but the victim’s tunnel vision was so focused on that gun that she lost the awareness of her peripheral vision, which is essential for size comparisons.

When we are bored out of our skulls, we often feel as though time has literally slowed down—seeming to take forever to go by (this happens to most 9-to-5 office workers, factory employees, and the poor folks who sit in tollbooths all day with no television!). On the flipside, when we are involved in an exciting activity or doing something we love to do, time seems to go by quickly. Time definitely flies when you’re having fun! But time itself has not changed; only our perception of it has changed.

This might help to explain the “missing time” phenomenon of driving along, usually late at night, and suddenly realizing three hours and many miles later that you have no recollection of the drive time in between. Missing time may simply be a lapse in conscious awareness, where the brain goes into auto-pilot mode to make sure that we are safe and sound as our minds wander off. It may even be a light hypnotic state one enters during a long, boring trip, or while doing something rather tedious and repetitive. Some people report UFO abductions during missing time episodes, and these may be more closely related to sleep paralysis than what we are discussing here. The loss of awareness of chunks of time can be a type of brief amnesia

or fugue in which part of the brain continues to make sure the body knows what it is doing, even as the other parts of the brain have no clue.

The only way to find out what happens to our aware mind during a missing time episode is to undergo hypnotic regression, although most people might choose to not know!

Marie may have had her own missing time experience many years ago while living in the San Fernando Valley.

Many years ago I was a member of the Planetary Society, and Carl Sagan was the main speaker at their annual conference in Pasadena. I had a ticket and was so excited to finally see a "hero" of mine speak. He would be at the conference during the evening, and I prepared to get dressed and get my stuff together for the approximately 30 to 45 minute drive from my Burbank home. Before I left, I had several unusual occurrences that may or may not have had anything to do with what was to come. I tried once to leave my home, saying goodbye for the evening to my husband at the time, and found I could not open the door. The doorknob was stuck. After a few attempts, I left feeling annoyed and a bit deflated, as though something was trying to tell me not to go. The feeling became more palpable as I got in my car and turned on my gigantic cell phone (remember those)? I just felt "off."

Ignoring the red flags and warning signals of my own gut, I headed out and onto the freeway. It would have been a simple drive, from the 134 east to the 210 into Pasadena. I called my husband to tell him I was okay on the road, and then settled in for the drive. There was traffic, so I knew I might be a bit late, but I was relaxed and excited. No trauma at all.

Yet, somehow, I "came to" two hours later and was heading north on the 2 freeway to Sacramento. I was totally disoriented when I snapped back into my body, and totally unaware of the two hours I had lost. In a total panic, I called my husband in tears, got off the freeway, got back on in the opposite direction, and found my way

home. I never saw Carl Sagan, and, due to his passing, would never have another chance.

What happened to me during those two hours? I did not have another identity. I lost time, and found myself in a place I had never been, heading full north. I had, and to this day have, no recollection of how I got so off course. Yet my brain was able to function on automatic pilot to keep me driving safely, despite my mind being elsewhere. My mind shut down. I remembered nothing. Was it a fugue? Missing time? To this day, the experience haunts me and I often white-knuckle it while driving alone on the freeway at night!

The mind does wander, and not always voluntarily, as in a daydream. Often our minds wander without any awareness. This is referred to as "zoning out," and perhaps I just zoned out for awhile. But, the question remains: Where did my mind zone out to?

Larry has also had his own missing time experience, made even more intriguing by the fact that others with him at the time also experienced the loss of time.

It happened while conducting an investigation of an outdoor loca-on in southern Arkansas in which hundreds of people throughout the years have reported seeing anomalous lights floating approximately 6 to 12 feet above the ground. Additionally, there have been several UFO reports regarding this particular area. On this particular evening in late 2007, our group of six investigators experienced something that to this day I am unable to fully comprehend. The location, an approximately 5-mile stretch of abandoned railroad tracks, is geographically situated in the middle of nowhere. Local legend has it that one dark and cloudy evening the train had broken down and, while stopped for repairs, the

conductor was robbed and decapitated by a local gang of thieves. As the tale goes, the multicolor red and green lights that are regularly reported are from his lantern swinging side to side as he desperately searches between the tracks for his missing head. Irrespective of the lack of authentication, it is a cool story, and one that warrants further research. Every time that we have been to this particular location we have seen the lights; however, I believe there is a valid explanation for them—in this case a geological one. Nevertheless, this is an interesting location, and one we like to take new investigators to in order to instill them with the belief that things aren't always as they seem—especially within the field of paranormal research. Certainly, in this incident, they definitely weren't!

On this particular occasion, we arrived around 7:30 p.m. We parked our cars in the same location that we had parked many times previously. This area is a completely clear-cut expanse that is very visible from the tracks—remember that because it is an important fact. After unloading the equipment that we had planned to use, we set out on foot to our final destination: the fifth railroad trestle, which, in our experience, was a "sure bet" to see the anomaly. Normally, this trip took about 45 minutes, and true to form we arrived approximately 45 minutes after leaving our vehicles. Yes, we saw the lights; however, we also experienced several other weird occurrences throughout the course of our investigation that evening, such as strange noises and pebbles being thrown at us from the woods—not to mention the constant feeling of being watched.

We searched the area in vain, even going so far as to deploy one of our FLIR thermal imaging cameras, knowing that the thermal heat signature of man or animal would give away their position. After several hours of conducting environmental and geological experiments, it was finally time to wrap up and head back to our cars. By this time, we were all anxious to hit the road, as it was late in the evening, and several of us had long drives home. We loaded up our equipment and began the short trek back to our

vehicles. We walked…and walked… and walked…. At one point I even recall remarking to the group that something didn't feel right. I remember feeling a sense of disorientation and "tightness" in my stomach.

Next thing we knew, we had reached the other end of the tracks that abutted the roadway. I looked at my watch. Two and a half hours had elapsed since we began to walk back toward our vehicles. What the hell had happened? Not only was this was a trip that should have only taken 45 minutes, but how was it possible that six investigators all missed seeing four full-sized vehicles parked in a large, clear-cut area under a bright, moonlit sky? We hurriedly walked back up the tracks, arriving at our vehicles about 10 minutes later. At that point, we were only 10 minutes away from our vehicles, yet, according to our watches, had begun walking two and a half hours prior to that. Now, that REALLY didn't make any sense!

To this day, this experience was one of the most baffling incidents I have ever personally experienced. I have no rational explanation for the two and a half hours of lost time that five other individuals and I experienced. All of the members of my group who were in attendance that evening likewise cannot explain what happened. Was this a "simple" time loss incident perhaps spurred by exhaustion and spread by group influence, or was it something far more bizarre?

To this day, neither Larry nor Marie has chosen to undergo hypnotic regression to uncover the truth of what may have happened to them during those lost hours. But rest assured both are pretty convinced that anal probes were not involved!

Time Storms

Some of the most bizarre and chilling reports of missing time, time warps,

and even “time storms” are documented in the book *Time Storms: Amazing Evidence for Time Warps, Space Rifts, and Time Travel* by British researcher Jenny Randles. Many of the cases Randles discusses involve not only the movement of physical objects through space, but also through time, often accompanied by a strange “energy cloud” that brings about specific physical effects leading to a “time storm” experience. Time storms have been likened to “rips” in the fabric of reality, and some of these physical effects are said to include strange lights, changes in the electromagnetic field, nausea, disorientation, and missing time. Though these experiences involve both the body and the mind traveling together, they still present an interesting argument for time travel itself, something Randles states is being widely researched and closer to becoming a possibility than we think. One might think of these time storms and time slips as examples of involuntary time travel.

Time storms and slip experiences have been reported throughout the world to a variety of people. The commonalities of individuals who report entering a strange mist only to exit it hours later in the same location, or somewhere else entirely, with no sense of the journey in between, can’t be ignored. The sheer fact that these people have been witnessed to disappear on security cameras, then reappear hundreds of miles away, suggests that, at least in these cases, there is more going on than just brain malfunctions and misfirings. The argument, however, is that these are actually physical experiences involving EMF manipulations that are simply causing the individual to black out and maybe even fall into some kind of vortex or earthbound black hole that deposits them across town. Seems a bit ridiculous—however, in this field there are many ludicrous sounding theories that are advanced—and scant evidence to prove or disprove even the most absurd.

Randles also finds links between time storms and NDEs, suggesting that one might often be mistaken for the other. Perhaps the out-of-body sensation felt during a time storm is similar to that of someone on the verge of death who floats up and away toward a bright heavenly light. There are even reports of time storms involving visions of tubes or tunnels within a glowing mist, which, incidentally, might look an awful lot like traveling down the tunnel during the NDE. Also, much of the neural and hormonal changes that occur during an NDE also are said to occur in time storms, which involve the

presence of extreme fear of death.

If time is not linear, and our mind is not located in our brain (which perceives linear time), then is it outside of the realm of possibility to suggest that the mind can time travel in ways that the body cannot? The many anomalies examined in this book posit that the mind does have the ability to transcend its chains to the present—the now—and venture into the past and future. Maybe not at will, but with practice, it might be possible to take a mind vacation to ancient Egypt or shoot off 10,000 years into the future, if we know the techniques for tapping into the landscape or fabric of time.

Physicist David Bohm spoke of an implicate order underlying this manifest reality. This order contained the entirety of time, all at once. If indeed there is a unifying field, perhaps the Zero Point Field of theoretical physics and now, metaphysics, or the "Cosmic Memory Field" that Ervin Lazlo writes about in *The Akashic Experience*, that connects everything and everyone, then who is to say that we do not tap into the past or future during our more anomalous and less-understood experiences? Lazlo's book suggests that there is indeed evidence from cutting-edge sciences to support the concept of a cosmic memory field that encompasses all the information of the past, present, and future, and that we can access this information in altered states of consciousness.

"A large body of information suggests we can non-locally acquire information about others who are beyond sensory contact. Hundreds of these experiences have been documented," Lazlo writes, citing trans-spatial connections between distant individuals that have been demonstrated in actual studies examining "correlated brain functions of distant individuals." This supports the idea of shared OBEs and NDEs, and, yet, we as individuals can also access information, even perhaps of our own existence in other universes, or what happens to us when we die. "The Akashic field contains not merely a passive record of a person's consciousness, created during that person's lifetime, and then persisting unchanged, but also harbors a dynamic bundle of information based on the experiences accumulated in that lifetime."

Déjà vu, mind slips, time trips, OBEs, and NDEs—maybe we break out of the confines of linear time and walk through the Akashic field more often than we think.

In the next chapter we will travel through a different landscape of the mind and time, one we all experience on a daily, or perhaps we should say, nightly, basis.

Chapter 8

TRAVELING THE DREAMSCAPE

Dreams are illustrations…from the book your soul is writing about you.
—Marsha Norman

Dreams are today's answers to tomorrow's questions.
—Edgar Cayce

Myths are public dreams, dreams are private myths.
—Joseph Campbell

Even though we all don't lead James Bond-esque lives filled with action, intrigue, and beautiful women (or men, for those so inclined), believe it or not, we do lead double lives.

We are not suggesting we are all having affairs, work on the side for the CIA, or double as a super hero when we get home from work (although for those of us who work full time and have young children, it certainly feels that way!). Our double lives begin at night when we close our eyes and our brain begins producing DELTA waves—and we slip off into REM sleep.

We all lead double lives—in our dreams.

Many books and movies have tried to delve into the strange and mysterious world of dreams and research labs abound that are devoted to sleep and dream studies. There are an abundance of theories regarding the interpretation and meaning of our dreams. Psychologists and dream researchers may tell us that our dreams are nothing more than the

subconscious working out the kinks through symbolism and metaphor. (Would this mean that dysfunctional people, having more kinks, have more dreams?) Or perhaps dreams allow our imaginations to finally get a chance to run amok, something we rarely allow them to do during our normal day-to-day existence.

Or, perhaps, as some researchers and maverick authors are suggesting, dreams are instead a glimpse into another reality, a parallel domain that many insist is just as real, if not at times *more* real than the one we all know and love.

Although some dreams certainly seem to symbolize life challenges or fears, not all dreams have the same "feel." When we are having a dream most imagery is presented in an interpretive state. Many times the imagery represents something in our waking, conscious state that needs to be confronted, or even changed. Sure, dreams of tidal waves can mean we are overwhelmed and in fear of "drowning" under the weight of our challenges. Yes, recurring dreams of being chased by a dark figure can signify that we are "running from something" in our waking state—something that we had better stop and confront before it does damage to us, either physically or mentally. And who has not had a dream of flying? Some say that this represents the desire for freedom; others believe they are sexual dreams. Maybe they are just our opportunity, as human beings bound to earth, to get a "higher perspective" on our lives.

One theory regarding déjà vu holds that a déjà vu event is really a psychic experience that is related to our dream experiences. We dream of some event, person, conversation, or place, and then we actually experience it in our waking reality sometime later. Did we have an out-of-body experience while dreaming and actually *do* what our déjà vu indicates, or could our dreams actually be precognitive in nature? These experiences may even provide short glimpses into our existence in a parallel universe. During the sleep state, we may somehow tap into a field of collective experience, including our own, and then later, while awake, have a vague re-experience of that event.

Lucid Dreaming

The most cutting-edge dream studies are focusing a bit less on the "symbolic" angle, and more on the potential that dreams may hold for experiencing other levels of reality, communicating with people in our dreams, and even walking the landscape of time from the past to the future. For Robert Waggoner, author of *Lucid Dreaming: Gateway to the Inner Self*, and president-elect of the International Association for the Study of Dreams (IASD), lucid dreaming is the ability to control one's dreams and even create the dream experience. Having experienced many lucid dreams himself, Waggoner wanted to delve deeper into the idea of becoming conscious in one's dreamstate. His years of research, documented in his fascinating book, made the author wonder "how extensively the mind influences perception and sensation while waking. Conscious of the dream state, the influence seems pervasive." Waggoner realized that in his waking state, he was assuming that what he experienced was just things "as they actually exist." But his research and his exposure to hypnosis gave him pause that "waking sensory experience could actually be considered modified."

Thus, the mind plays a role as the modifier of waking sensory reality.

The term *lucid dreaming* was coined by Frederick Van Eeden in 1913. Van Eeden was a psychiatrist (big surprise!) who meticulously recorded many of his dreams. Lucid dreaming is not a new interest or area of study; however, during the last century, those in the metaphysical movement have certainly increased its public awareness, and catapulted its popularity.

According to *DreamStudies.org*, lucid dreaming, or at least written records of it, goes back as far as 1000 BC with the "Upanishads," the ancient Hindu text, and is even a part of another ancient Hindu tract, the "Vigyan Bhairav Tantra," which describes how to direct consciousness within a dream and visions states of sleep.

Dreams were held in high regard in Greek philosophy, and Aristotle may have experienced lucid dreaming in 350 BC when he wrote in his *On Dreams* that "often when one is asleep, there is something in consciousness that declares that what then presents itself is but a dream." Plato and Socrates also wrote about dreams, and some suggest that the actual first lucid dream report occurred in 415 AD courtesy of St. Thomas Aquinas, although St. Thomas later suggested that some dreams were demonic, thus plunging dream

research into a “dark age” of its own. Even Rene Descartes, the famous French philosopher, mathematician, physicist, and writer, wrote of his own lucid dreams in a private journal known as “The Olympica.”

The research of Stephen LaBerge, a graduate student at Stanford University in the 1980s, may have ushered in the current wave of interest. LaBerge claimed that he had been experiencing lucid dreams since his childhood. His research took lucid dreaming to a new level when he succeeded at having actual lucid dreamers in his research study send messages to the researchers. He also trained lucid dreamers to “fly” and perform various tasks while dreaming, reporting the results in his 1985 book, *Lucid Dreaming*. When we dream, it seems so real to us. Waggoner states that, in almost every dream, our senses do not inform us of the difference between waking and dreaming. Instead, our senses “seem to confirm that whatever reality seems to be happening is indeed happening.” He goes on to say that the only way we can truly realize the nature of the reality we experience in the dream state is to increase our conscious awareness of the dream state. Lucid dreaming can do that.

Bringing conscious awareness into the dream state allows us to have some control over what we dream about, who shows up in our dreams, and how those dreams ultimately turn out in the end. According to Waggoner, lucid dreaming can be learned, even perfected, with practice and by following certain directions designed to prime the pre-dreaming mind to do what we want it to do. It can be as basic as stating that you will recognize your own hands at some point during the dream, then in the lucid state holding your hands up and “seeing and recognizing them.” Or it can be much more complicated, as in learning to travel to other locations, talking with other people (perhaps even other lucid dreamers!), or maybe even giving a positive ending to a recurring nightmare by changing the outcome.

Lucid dreams feel more “real,” because of our more conscious awareness and participation in them. Rather than being the audience, watching our dreams play out like a movie on the screens of our minds, we can actually become the leading actor or actress, as well as the writer, director, and producer of the entire show! That begs the question: Do we then host our own Academy Awards? And if so, wouldn’t we be a shoe-in for winner?

Waggoner writes that there are levels of lucidity, six degrees of awareness within the dream:

1. **PRE-LUCID—**The dreamer notices in the dream something bizarre or unusual. Example: Marie is dreaming of a pink pony and has the awareness in her dream to say to herself, “Ponies can’t be pink. I’m trippin.’ Must have been the Kung Pao Chicken….”
2. **SUB-LUCID—**The dreamer is vaguely aware of dreaming. Example: Larry dreams that he won the mega lottery, then thinks that he must be dreaming because he never even purchased a ticket.
3. **SEMI-LUCID—**The dreamer knows he or she is dreaming, but lets the dream unfold with minimal interference. There are minor adjustments the dreamer makes, but the majority of the dream unfolds as is. Example: Larry dreams he is helping his wife clean house, realizes he is dreaming, and lets her do most of the work as usual, as in waking life. Larry’s note: Of course, this example could also be considered pre-lucid as I often clean the house! Okay, maybe not.
4. **LUCID—**The dreamer knows that he or she is dreaming *and* realizes that he or she can make choices and make major changes to the dream experience. Example: Marie dreams that she wants Stephen King’s career, and then hires a hit man named Guido to take King out and assumes his identity.
5. **FULLY LUCID—**The dreamer can recall his or her physical life and all predetermined tasks to perform. Also, the dreamer shows high levels of dream manipulation. Example: Larry is lucid and says, “What did Marie ask me to do yesterday? Oh, yeah, she wanted me to ask the wolf in my dream what it represents, and Marie is a woman and I know, if I don’t do what a woman asks, there will be drama.” So Larry approaches said wolf, asks the question, and the wolf says, “I’m a wolf. What do I look like, dummy?”
6. **SUPER LUCID**—The dreamer shows an extremely high level of dream manipulation ability, as well as clarity of thought, personal energy, memory, and so on. This state represents the highest awareness of all. Example: Marie is lucid in her dream and, knowing her own super ability to lucid dream, decides that she wants to experience unconditional love. She shouts her intention into the awareness and suddenly feels an intense sensation of being loved. To

be fair to Larry, another example: Larry is fully lucid, and aware of his power and control as a lucid dreamer. Being that he loves 80s music, he wants to know what it feels like to be in an 80s hair band. So he puts his request “out there,” and voila! He is on stage playing drums with Faster Pussycat at the Troubador.

(Larry and Marie wish to apologize to Robert Waggoner for our examples of his lucidity levels and hopes that he takes them in the spirit of humor with which they were intended!)

Obviously, getting to that highest level of lucidity requires patience, persistence, and good, old-fashioned hard work. But most of us have, at one time or another, been aware in a dream that we were indeed dreaming. And for those of you who want to learn everything there is to know about lucid dreaming, we strongly suggest that you pick up Waggoner’s fascinating book.

ADVENTURES IN LUCIDITY

I was born a lucid dreamer, meaning I am naturally aware that I am reaming while asleep, and/or I can make conscious choices within the dreams themselves. This is my definition as I have discovered in my own research, the term “lucid dreaming” tends to be a blanket statement to describe an intriguing sleep-time phenomenon. Most people equate lucid dreaming to having full control of one’s dreams, which is completely possible and can happen very regularly depending on the person. However, to have “full control” all the time isn’t necessarily practical or very common at all.

Even as a child I could control my dreams more often than not, and had many intense dream events including astral projections, precognitive dreams, and out-of-body experiences. I would often see my school days in advance and at times would be able to actively interact with my classmates there. This would give me

tremendous insight into how to deal with my actual day at school. To my parents' dismay, this also made me inclined at times to want to skip school entirely and simply listen to the radio while playing Gameboy if nothing interesting was being taught. Despite my natural prowess at attaining and utilizing my lucid dreams, I would still hit plateaus in the level of control I could consistently attain. This I have found to be true just like any other part of our growing and learning process in life. To excel and grow toward your desired path, one must scrutinize and rectify any internal conflict. It is our perceptions of who and where we are that shapes the reality we identify with, awake or aware while asleep. Dreams are, after all, a form of subconscious communication, and as many who practice self-improvement know, understanding subconscious programming is a vital part to understanding your true self. How we perceive reality is vividly enhanced in the dream or "astral" world. If you have any phobias in your waking life, they can lead to nightmares should you encounter those concepts in your dreams. If you have a strong desire in your waking life, in your dream-life the desire tends to be an almost uncontrollable attraction.

> By far the most fascinating subject in the dream world is shared or telepathic dreams. My personal experiences with this subject have been profound and a point of high interest to me. These experiences have lead me to believe that the "astral plane" can be used as a sort of telepathic-internet. Our bodies can equate to the computer and modem, the astral or dream plane being the conduit in between each computer. The more tuned up your machine is, the faster you can process info and make your games look better while playing with others online. There are many great techniques out there to attain lucidity. From there the fun is up to you. So train your brain and we can all meet up on the astral plane!
>
> —*Jerry Avalos, www.youtube.com/user/whoslucidwhatnow*

Yet, lucid dreaming seems to go against the traditional idea that dreams are

the subconscious getting out its kinks. If we have control during lucidity, then that must mean at some point we wrestle control from our subconscious before beginning the process of changing the intent of the dream from a potential lesson learned (or kink worked out) to an awareness experienced during the dream state. No longer is the subconscious in control of every aspect of the dream's imagery or direction. The conscious mind has hijacked the plane. The subconscious has left the building.

Waggoner is continuing his research and is now experimenting with dream telepathy (see sidebar) while continuing to be at the forefront of our understanding of lucid dreaming.

DREAM TELEPATHY BY ROBERT WAGGONER © 2009

A post in a popular lucid dreaming forum caught my eye. Someone wrote that he saw no evidence for shared dreams or mutual lucid dreams. Besides, he continued, no one has ever offered a "mechanism" to explain how a mutual dream could occur. Without a mechanism, he concluded, mutual dream reports were likely coincidental and meaningless.

After publishing a chapter on mutual lucid dreaming in my new book, *Lucid Dreaming: Gateway to the Inner Self*, I could not let this assertion go unanswered. I posted a new topic, "Mutual Dreams. Any Evidence? I think so…," and made my case for the existence of mutual dreams. Moreover, I suggested the likely mechanism for mutual dreams: dream telepathy.

Few people realize that in the 1960s and 1970s, scientific studies funded by an NIH grant investigated dream telepathy. A prominent psychiatrist and researcher, Montague Ullman, MD, and psychologist, Stanley Krippner, PhD, led the research projects at the Maimonides Medical Center in Brooklyn. While a telepathic "sender" gazed at a randomly selected image, the experiment's

telepathic “receiver” lay sleeping in another room, hooked up with equipment to monitor when he entered REM sleep and dreaming. At the end of the REM cycle, the receiving subject was wakened and asked to describe his dream.

To judge the results objectively, a panel of scientists were provided the telepathic receiver’s dream reports and a group of other images, and asked to rate which image most closely matched the dreams. The judges remained unaware of which image was the “target” image. Significantly, the judges routinely matched the telepathic receiver’s dreams with the actual target image! The fascinating story of the experiment’s unfolding can be found in the book, *Dream Telepathy: Experiments in Nocturnal Extrasensory Perception* by Montague Ullman, Stanley Krippner, and Alan Vaughan. Decades later, this controversial and little known corner of science received new attention from scientist, Dean Radin, who re-analyzed all the statistical data of numerous dream telepathy experiments and concluded the results were significant and beyond chance.

In order to make my case to the lucid dreaming forum for dream telepathy as the likely mechanism for mutual dream reports, I proposed an experiment. I suggested that an objective coordinator find a volunteer to be the telepathic sender and I myself would be the telepathic receiver. The coordinator would supply a group of images to the sender, and on the appointed night, she would select one and telepathically transmit it to me. In turn, I would suggest to myself that her images would come to me in the dream state, and in the morning, I would submit them to the coordinator.

It took a month, but a volunteer for the role of telepathic sender was found. Thankfully, she had investigated telepathy as part of a class project, so she believed that dream telepathy was possible. I didn’t tell her that I had only done dream telepathy with people I knew personally. For me, this would be a bigger challenge, since I did not even know the sender’s full name, nor had I ever met her in person. I needed to isolate her thoughts amongst the billions of

people on the planet and then reconstitute them in a dream.

The experiment is on-going, but here are my dreams and the image from the first dream telepathy session:

- **DREAM 1**—I sit with others around picnic tables, talking about cooperation and water.
- **DREAM 2**—My wife calls a friend on the phone while we sit in bed. She tells him to change the game time from 5 to 6:30. We then go to a restaurant with a family-like living room. There are pictures of scrambled eggs and bacon, etc., hanging on the walls. I have a beer. We walk to a series of white tables, and sit across from a woman in a yellow gold dress who is very pregnant! As we sit down, she gives a gasp like she may be ready to have the baby—she looks at her husband and seems worried.
- **DREAM 3**—TJ (a professor here) sits with three others in front of a TV cabinet, watching a show—but it also seems they are being interviewed by the television. There is food on a nearby table with a white table cloth. At some later point, TJ seems to come with a tractor to get things.
- **DREAM 4**—I go along a street and see a couch near the road, which has books on it. I pick up an old book, which seems to have a foreign name—like a fantasy book or book of tales or myths. I open it up and it has a colorful image of a man in a robe, pointing with his hand (looks like Moses).

  I then seem to be waiting outside a café for my brother, but the café is not open and my brother is not there. I decide to leave, but now the roads are icy, and the street is blocked by cars and trucks. I go back to the café.

  My brother shows up with his wife and others, and I realize that another place, Giselle's, is open. I go there, and discover another café upstairs, which is more charming with old windows, plants, etc. Here, they are offering a brunch of eggs, fruit, pastry, and more. Suddenly, it fills up with people. Just as I prepare to sit on a sofa, a disabled

man appears, and I give him the seat. I tell people that I am doing an experiment with some Europeans (visit forum *www.lucidipedia.com*, Advanced section).

As soon as the coordinator received my dream account, he immediately knew which dream image had been sent: the one with a waitress in a café, serving people food and drink at tables, while the cook dressed in white (Moses like) stood behind the counter by artist Seiki Uehara.

Figure 8.1 *Image used in telepathy experiment.*

As you can see, my repeated dreams of cafés, food and drinks, tables, and waiters nicely reflect the main content of the image. I even notice some of the details, like the gold dress of the woman seated at the main table. In dream telepathy, you do not “see” the image as it is. Instead, you pick up the thoughts of the sender, and their interpretation of the image. Sometimes this can be extremely

close, as in this case; but other times, the sender can focus on imagery *implied* by the target. In those cases, the receiver may mention the implied imagery (not visible in the target).

Dream telepathy, therefore, seems the possible underlying mechanism of shared or mutual dreams. We connect telepathically in the dream state. The common reports of dreamers who see their grandparent say "goodbye" in a dream, only to awaken to the news of their unexpected passing, may be explained by dream telepathy. In cases of shared or mutual dreaming, another's dreamt experience may telepathically pull us into their thinking and result in a similar mental dream creation. If you wish to explore dream telepathy further, try it for yourself. Find a friend to select an image and send it to you. Intend to dream selectively of their mental imagery. In the morning, share your results. You may discover that dream telepathy represents an alternative way of communicating and shows evidence of your larger potential.

Robert Waggoner is the author of *Lucid Dreaming: Gateway to the Inner Self*. You can learn more about his work at www.lucidadvice.com.

For some people, lucidity may occur without intention or warning. We received several stories from individuals who had experienced unusual dreams often containing elements of déjà vu, precognition, and some degree of lucidity:

> *I had this dream recurring, I don't know how many times I had it, but it was happening several years before I even met my husband. I was still actually married to my oldest daughter's father while I was having these dreams. There are actually two dreams to this. The first one is that, in the dream, I was walking up a hill in a very large pasture with someone (I didn't know who at the time). This person was very tall and was wearing cowboy boots, jeans, a dark colored T-shirt, and a hat. I don't remember a whole lot more about this person, because in the dream, while I was walking, I was looking down at the ground. We reached the top of the hill, and the person and I ended up getting*

ready to kiss, but every time, right after kissing I would wake up from this dream. I would never even get to see the person's face to know who it was. It actually ended up being Brent (my husband), and the hill we were walking up is on his parents' farm. When he invited me up here the first time, we went for a walk up that hill. The whole time we were walking, when I came here to visit, I kept thinking, "I've been here before...."

—Carol, October 2009

When I have lucid dreams, I can do anything or go anywhere I like. Once I realize I'm dreaming, I can change my dream into mostly anything that I wish. I can have superpowers, visit other places and times, meet other people. I love the nights when I can dream like this. It feels like my dream lasts for hours and hours, and when I wake up, only maybe 30 min has passed. I feel extremely rested also, like I've just had a full nights sleep in only 30 min. Most of the lucid dreams I have happen within 10 minutes of me laying down. I know scientists say that REM sleep doesn't happen that soon, but to me, it does. One of my lucid dreams still kinda scares me though. I knew I was dreaming, and was controlling my dream, but something happened I did not plan. I went into this kitchen, and Jesus was there. He told me to follow him as he walked into this picture on the wall. I followed, and for a brief second, as I entered the picture, I felt my whole body just relax. I've never been so comfortable and relaxed in all of my life. I felt weightless, actually now that I think about it, it felt like I didn't even have a body anymore, or maybe I wasn't in it anymore, I don't know. But it scared me, since I knew I was dreaming. I was scared it was a trick and it wasn't Jesus and was also scared that maybe I wouldn't wake up from this dream if I followed and since I didn't want, so I forced myself to wake up. I've never experienced anything like this since, even though I've tried to have this same dream a number of times.

—Wes Rickena, November 2009

I can fully control my dreams to such an extent I can remember what I did to who and where it happened. In my dreams I tell myself I'm dreaming and if I get scared I can opt to leave my dream/nightmare at any given time in which I choose. I can also return to a dream the following night to find out things I couldn't because I left the dream too early in order to be able to deal with it at a later date. I have recurring dreams too in which as soon as I enter my dream I recognize it and can fast forward through it to get to the part I was at previously.

—Hayleymay, October 2009

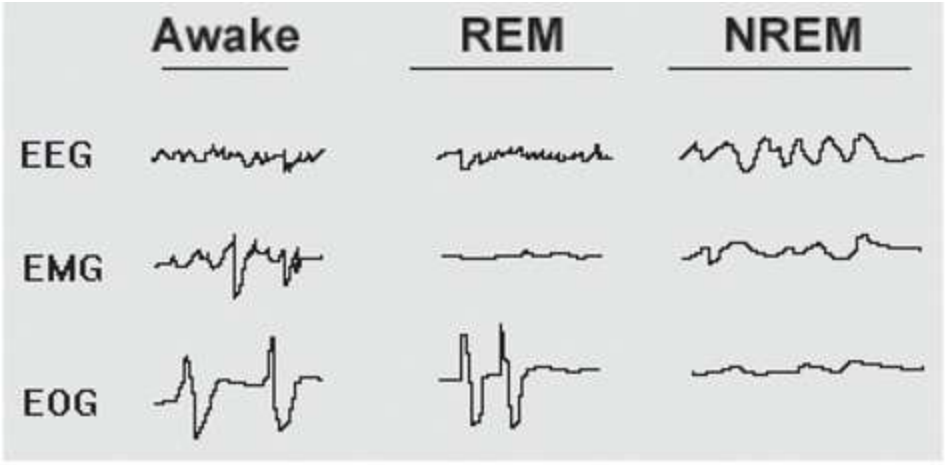
These experiences happen to regular dreamers who understand the difference between the usual symbolic dream, and one that smacks of a whole other reality that parallels the waking state.

Parallel realities, maybe even parallel universes. Yet our “daytime mind” rarely gets the opportunity to observe these elusive glimpses. Déjà vu gives us a peek into what may be going on during the dreamstate. However, when we dream, the process lasts a lot longer and offers more opportunity for exploring the physical and mental landscape. So what then happens to our brain when we sleep that might trigger this ability to journey into realms unknown?

REM Sleep

In humans, sleep is divided into two main phases: non-REM sleep, which occupies most of our early sleep night, and REM (Rapid Eye Movement) sleep, during which we dream. Non-REM sleep may be a resting state for the brain, following the more intense waking brain activity we experience during the daytime. During the non-REM state, the brain remains awake and aware, but not as active as during the complete waking state. Most dreaming occurs during the REM stage of sleep. During REM, a person’s eyes move up and down and back and forth rapidly. Utilizing an EEG (electroencephalogram) test, scientists have determined that the pattern in the brain during REM sleep is similar to the EEG pattern in the brain when awake. However, muscle activity is very quiet during REM sleep, to keep muscles inactive and prevent us from acting out our dreams, at least most of the time.

Figure 8.2 *The EEG stages of REM and NON-REM sleep in the brain. Image courtesy of Wikimedia.*



We go through five stages of sleep, with the fifth stage being where REM begins. During the REM stage, even though we are asleep, the body's heart rate and breathing actually quicken, and blood pressure rises due to the presence of alpha waves, which are present during our normal daily activity. During this state, the rest of the body is essentially immobilized due to the release of glycine, which is an amino acid, from the brain stem. This occurs approximately 90 minutes after falling asleep and cycling through the first four stages: light sleep, slightly deeper sleep, and the deepest stages of sleep when the brain goes into delta stage, which is the slowest brain wave (zero to four cycles per second). These make up the non-REM stages. Then, REM begins and the brain becomes active again, resulting in the dreams we experience.

How many different dreams do you have nightly? Most people dream more than once per night. In fact, we often have several dreams, lasting anywhere from 5 to 20 minutes on average, and, contrary to popular belief, we do dream in color. We just don't remember every dream upon waking.

From the National Institute of Neurological Disorders and Strokes:

> **R**EM sleep begins with signals from an area at the base of the brain called the pons. These signals travel to a brain region called the thalamus, which relays them to the cerebral cortex—the outer layer of the brain that is responsible for learning, thinking, and organizing information. The pons also sends signals that shut off neurons in the

spinal cord, causing temporary paralysis of the limb muscles. If something interferes with this paralysis, people will begin to physically “act out” their dreams—a rare, dangerous problem called REM sleep behavior disorder. A person dreaming about a ball game, for example, may run headlong into furniture or blindly strike someone sleeping nearby while trying to catch a ball in the dream.

Some scientists believe dreams are the cortex’s attempt to find meaning in the random signals that it receives during REM sleep. The cortex is the part of the brain that interprets and organizes information from the environment during consciousness. It may be that, given random signals from the pons during REM sleep, the cortex tries to interpret these signals as well, creating a “story” out of fragmented brain activity. During dreams, some parts of the brain are de-activated, including the dorsal lateral pre-frontal cortex, which is the part of the brain that is responsible for decisions or volition, and for rational thought. Dream research from a computerized imaging technique called positron emission tomography (PET) in the mid-1990s showed that REM dreams begin in the limbic region of the brain, which is our “ancient” brain. This region controls emotions and becomes highly active, suggesting why dreams can be very emotionally potent.

Dreams and OBEs

Although no one seems to agree on why we dream at all, even fewer agree on how to interpret dreams. Perhaps the brain is just gathering bits and pieces of abstract information stored in the neocortex, and putting them together in ensemble fashion. Or, perhaps it isn’t the brain doing the work at all, but something outside the brain.

Many people liken dreams to out-of-body experiences, or OBEs. Similar to the OBE experience, there is that sensation of being in one’s awareness, but not in one’s body. Lucid dreaming comes close to the OBE experience;

however, it lacks many of the key aspects that most OBE-ers report, such as a connecting silver strand or string that is supposed to keep the person's traveling essence or awareness attached to the physical body, or the person's ability to look down at their own body when flying high above. An OBE can happen at anytime, too, and not just when asleep.

The concept of teleportation then takes the OBE one step further, by transporting the body along with the awareness or mind. OBE also allows a person to specifically travel this level or landscape of existing reality, while dreams allow us glimpses perhaps into alternate levels of reality. "Dreams are far more than just a symbolic representation of communication from your subconscious" writes Dr. Bruce Goldberg in *Exploring the Fifth Dimension: Parallel Universes, Teleportation and Out-Of-Body Travel*. Goldberg examines the common elements between concepts involving parallel universes, as theorized by physicists, and the ability to traverse other realities, whether via dreams, teleportation, or OBEs.

"Dreams are as valid and relevant to our lives as our waking state. The only real difference is that our dreams take place on a different plane of existence. That is why it is so difficult to understand and decode our dreams based on conventional paradigms," Goldberg adds. The physical laws of the dream worlds may not be the physical laws we live with every day here on our plane.

No matter which vehicle one chooses to ride in for traveling the various planes of reality, all result in the distinct feeling that the mind, or conscious awareness, is not attached to the body, and that dream states are as real as waking states. So, if the mind can take off at any time and jaunt around in all kinds of different planes of existence, especially during dreams, then we might hypothesize that dreaming across time is possible. Precognitive dreams suggest a person's ability to envision something that has not happened yet. For many people, these dreams are not just vague sensations of coming doom or gloom, but very detailed glimpses into a future event that ends up happening just as it was dreamt.

> *"About two years ago I had a dream that I was driving in my car eating some sort of candy bar. As I pulled up to a stop sign I remember looking around to see if any police were present because I was getting ready to throw the candy*

wrapper out of my car window and I didn't want to get a ticket. As I moved up to another stop sign getting ready to turn left I saw a cop car drive past and I remember laughing because just a few moments before I was looking to see if any police were around. After the cop passed I turned left and was almost immediately at a stop light which was red. When the light turned green I went to turn left and a red truck had ran his stop light and crashed directly into my car, which woke me up.

About five months later I had forgotten all about this dream until one day I was driving home from school eating a Twix. I was at a stop sign looking for any signs of a police car because I was getting ready to toss the wrapper. After I threw the wrapper out of the window I pulled up to another stop sign in which a cop car passed. Instantly my dream came back to me. As I turned left I came up to a stop light, where again I had to make an almost immediate left. Remembering my dream when the light turned green I didn't turn and I watched as a red pickup truck ran the red light."

—Bobby Nelson, host of Strange Frequencies Radio, November 2009

After the horrific terrorist attacks of September 11, 2001, thousands of people posted their precognitive dreams about the attacks on various Internet dream forums. Now it is impossible to prove anything that happens after the fact, but if even a small percentage of these people actually *did* predict the event in their dreams, it would be stunning. Many online dream research forums now allow people to post dreams they feel might be harbingers of things to come, so that they can be validated after the fact by outside parties.

So how are these dreamers tapping into future knowledge, and where is it coming from? Based upon the theories of quantum physics, most notably the Many Worlds Theory of physicist Hugh Everett III in the 1950s, we may be existing in an infinite number of parallel universes that are part of an expanding universe, and each time we take a new action or make a new choice, another parallel universe instantly splits off, and there we are again. This idea, as we discussed in Chapter 1, could help to explain déjà vu, remote viewing, telepathy, seeing the future, and past lives—not to mention nearly everything that we consider to be "paranormal" phenomena, many involving the ability to see into a storehouse of information to which we don't consciously have access.

Dr. Bruce Goldberg suggests a fifth dimension that is infinite in both scope and size. Goldberg suggests that only when we are in an altered state of

consciousness, such as in hypnosis, meditation, or even during an OBE, are we able to glimpse into this fifth dimension—the dimension that goes beyond our own three spatial dimensions, and one temporal. “The space-time continuum describes simultaneity of all events in our life. To our concept of existence we must now add a fifth dimension of parallel lives occurring on parallel universes.”

Thus, if in our waking reality we are but one of an infinite number of “us’s” that exist in all these additional universes, we might assume the same thing goes for our unwaking reality. Dreams, especially precognitive ones, may indeed be one of “us” moving across our reality into other dimensions where laws of physics are quite novel and bizarre, compared to our own. Not only that, we can bypass the linear time construct of the human brain, and see into the past and the future.

Obviously, if we look at the subjective, experiential data of millions of people who either lucid dream, have déjà vu, precognitive dreams, psychic abilities, remote view, or just plain experience altered states of consciousness that lead to visions, visitations, or imparted knowledge from higher sources, then something is obviously going on in the mind that allows it to reach beyond physical limitations. Perhaps there is a field of information that can be tapped into by those who have figured out exactly how to do so and can not only see their past lives, but what might happen two weeks from now.

Hypnogogia

Some of the most unusual experiences people report involving dream states occur in that in-between time between sleep and waking, known as “hypnogogia.” In this state particularly, people report very intense visions or sensations that differ from those in the dream state.

Hypnagogia differs from REM sleep and feels as though the body is still in sleep mode, but the mind is becoming active and aware. The term also applies to the stage immediately preceding falling asleep as well; however most experiences of what is termed “sleep paralysis” occur in the hypnagogic state. Similar to déjà vu, there are accounts of hypnagogia, which date back

to Aristotle. This transition stage between sleep and wakefulness also may be the origin of the Incubus/ Succubus phenomenon, in which people feel they are being sexually manipulated, pleasured, or assaulted by some unseen demonic creature that they are physically unable to fend off.

Sleep Paralysis

Sleep paralysis is often accompanied by unusual auditory elements such as humming, buzzing, rushing, and roaring noises. There may also be visual hallucinations of shadowy figures or dark entities whose features or form appears vague and blurred. In addition, there may be distinct physical sensations of being pressed, crushed, or suffocated. Some sleep paralysis sufferers have also reported tingling sensations, vibrations in the body, and even orgasmic feelings. Often the sufferer interprets these many sensations as having a paranormal element, and some ufologists have even theorized that many UFO abductions are in fact sleep paralysis episodes.

In the sleep paralysis state, a person is much more sensitive to extreme emotions such as terror or euphoria, depending on the experience itself. I (Marie) have had several terrifying episodes of sleep paralysis, usually when I am extremely exhausted mentally and physically. These episodes all have the same pattern. I feel as though I am paralyzed, cannot open my eyes, and sense a very heavy presence sitting on my chest, making it hard to breathe. I have also "felt" hot breath in my ears and heard something breathing heavily. I recall many times thrashing and screaming out, when I could find my voice, for help, but my husband at the time would always confirm the next morning that I neither screamed or thrashed at all during the night. Whatever was happening—and believe me, it felt real and physical—was happening in my mind. I am not alone in my experiences.

> *I've had a few instances of sleep paralysis, but this one in particular stands out. I went to sleep on the couch one Saturday night and "awoke" to find myself unable to move and my arms straight down by my side. I felt a heavy presence on my chest and looked up to find a shadow person floating above me. I could make out that he was a male shadow and when he spoke my perception was confirmed. The words he spoke will chill my soul forever. He said, "Fear me." I then felt my shoulders and head start to lift off of my*

pillow. He was pulling me up by the collar of my shirt. I am not really sure how I snapped out of it but when I finally woke up, my dog was laying beside me asleep the whole time. She was unaware that anything was going on; if she had, she would have barked. All of my sleep paralysis that I have experienced has happened on the same couch mentioned above. It has never happened in my bed or during the daytime, only when I would sleep there at night. I listened to Coast To Coast AM one night, while at work, and I heard his guest talking about sleep paralysis. I then knew what exactly had happened to me and it has never happened since. A few people that I have talked to said that as soon as they figured out it was sleep paralysis, it never happened to them again either. It's almost as if when we were unaware of what was happening to us, the fear of the unknown had us under its grasp. Once we learned what it was, the truth set us free.

—Tammy Jones, October 2009

First off, the sleep paralysis a lot of the time scares the crap out of me. My mind is awake, but my body will not move. I always hear and "feel" someone else in the room with me. I'm laying there helpless, and have this feeling of someone or something evil looking over me. Once, I'd swear someone whispered "Hello" into my ear. It was so clear and so close to my ear, it scared me quite a bit. I hate the feeling of helplessness when I'm laying there not being able to move, knowing that my body is asleep, and feeling this presence in the room watching me, and hearing all kinds of noises. (Only heard the clear voice the once.) I hear bangs in the room all over, doors opening and slamming shut, footsteps walking and some running in the room. There for a while, I started doing anything I could to try and stay awake. I think that doing that, then crashing after a couple days made it worse though.

—Wes Rickena

Similar to all other manner of unexplained phenomena, there are plenty of theories that have been presented to try to explain hypnagogia, including a loss of ego boundaries that allows the mental environment to run wild, which might explain the illogical elements of the experience. Others, such as researcher Herbert Silberer, suggest the hallucinations reported during this in-between state are abstract ideas turned into concrete images without the usual repression or censorship of our waking mind. Others still look to more folkloric elements often found in "night terrors." These experiences are especially intense, as in the British lore of an old "hag" that sits on the chest, or the sexually charged Incubus/Succubus of demonic origins.

Nightmares and Sleep Paralysis

Every culture has its own angle or explanation for sleep paralysis. None of them are very comforting!

- In African culture, isolated sleep paralysis is commonly referred to as "the witch riding your back."
- In Cambodian, Laotian, and Thai cultures, sleep paralysis is called *pee umm* and *khmout sukkhot*. It is described as an event in which the person is sleeping and dreams that one or more ghostly figures are nearby or even holding him or her down.
- In the Hmong culture, sleep paralysis describes an experience called "dab tsog" or "crushing demon." Often the sufferer claims to be able to see a tiny figure, no larger than a child, sitting on his or her chest.

Figure 8.3 *John Henry Fuseli's* The Nightmare. *Image courtesy of Wikimedia Commons.*

- In Vietnamese culture, sleep paralysis is referred to as “ma è,” meaning “held down by a ghost” or “bóng è,” meaning “held down by a shadow.” Many people in this culture believe that a ghost has entered one’s body, causing the paralyzed state.
- In Chinese culture, sleep paralysis is widely known as “pinyin”: gu y sh n or gu y chuáng), which literally translate into “ghost pressing on body” or “ghost pressing on bed.”
- In Japanese culture, sleep paralysis is referred to as *kanashibari*, literally “bound or fastened in metal,” from kane “metal” and shibaru “to bind, to tie, to fasten”).
- In Philippine culture, “bangungut,” or sudden unexplained death syndrome, has traditionally been attributed to nightmares. People who have claimed to survive such nightmares have reported experiencing

the symptoms of sleep paralysis.

- During the Salem witch trials several people reported nighttime attacks by various alleged witches including Bridget Bishop, which may have been the result of sleep paralysis.
- In Hungarian folk culture sleep paralysis is called “lidércnyomás” (“lidérc pressing”) and can be attributed to a number of supernatural entities such as “lidérc” (wraith), “boszorkány” (witch), “tündér” (fairy), or “ördögszeret” (demon lover). The word *boszorkány* stems from the Turkish root “bas-” meaning “to press.”
- In Iceland folk culture sleep paralysis is generally referred to as having a “Mara.” A goblin or a succubus (since it is generally female) believed to cause nightmares. (The origin of the word *Nightmare* is derived from her name.)
- Other European cultures share variants of the same folklore, calling her under different names: Proto-Germanic: *mar n*; Old English: *mære*; German: *Mahr*; Dutch: *nachtmerrie*; Icelandic, Old Norse, Faroese, and Swedish: *mara*; Danish: *mare*; Norwegian: *mare*; Old Irish: *morrigain*; Slovene: *môra*; Bulgarian, Serbian, Polish: *mora*; French: *cauchemar*; Romanian: *moroi*; Czech: *m ra*. The origin of the belief is much older and goes back to the reconstructed Proto Indo-European root *mora-*, an incubus, from the root *mer-* “to rub away” or “to harm.”
- In New Guinea, people refer to this phenomenon as “Suk Ninmyo,” believed to originate from sacred trees that use human essence to sustain their life. The trees are said to feed on human essence during the night as to not disturb the human’s daily life, but sometimes people wake unnaturally during the feeding, resulting in the paralysis.
- In Turkish culture, sleep paralysis is often referred to as “karabasan” (“The dark presser/assailer”). It is believed to be a creature that attacks people in their sleep, pressing on their chest and stealing their breath.
- In Mexico, it’s believed that sleep paralysis is in fact the spirit of a dead person getting on the person and impeding movement, calling this “se me subió el muerto” (the dead person got on me). (Adapted from Wikipedia.)

One of the more scientific theories suggests that, unlike in REM sleep, where the body is purposefully “shut down” during dreaming, hypnagogia may allow for a momentary blocking of that shutting down process that occurs not just entering the dream, but exiting it as well. Sleep paralysis, then, maybe explained as the mind reaching for wakefulness before the body gets the signal to catch up.

No matter the explanation, again this is an indication of some separation occurring between the mind and the body, suggesting once more that the mind can often experience realities that go well beyond the physical. Whether we move outside and beyond the body attached by a silver cord, or manipulate time and space in a state of high lucidity during a dream, or even scream out in horror at the sensation of being suffocated that ends the moment we “wake up,” the mind appears to have abilities that we are only just now beginning to understand.

Perhaps future research studies will corroborate precognitive dreams to the point where they become scientifically acceptable, and even prove that lucid dreamers are operating on a completely different level or plane of reality, where conscious will still exists, as well as links to the normal waking reality. As David Bohm once stated, there may indeed be three levels of order and the implicate order is the realm of the mind, of consciousness, to see the connectivity of all of life, and all of time, that we cannot discern in our explicate order of manifest reality. The reality we deal with in “the real world.” Yet, we may be wrong in assuming that this reality is the real one, and not the reality of our dreams, for does not a dream feel just as alive and potent and present? This could become very confusing, as it basically calls into question all that we consider real or manifest.

If our mind is a part of the brain, or separate from it entirely, and if consciousness is a construct of neural networks and firings and connections, or totally separate from our physicality, we know through the subjective experiences of people all throughout the world and throughout history that there are other worlds to be explored and that only the mind can be the explorer. The body is at this time not able to go where the mind can go. Someday, perhaps, physical teleportation and time travel may be a normal part of life, but for now we teleport and time travel only within the constructs

of our mind, where our consciousness moves between one state and another, changing perceptions, shifting beliefs, and opening up a whole new world of possibilities of experience.

And nowhere is this more evident than at night, when we lay down to rest after a hard day of work and tending to family, close our eyes, and dream.

> *We are not only less reasonable and less decent in our dreams...we are also more intelligent, wiser and capable of better judgment when we are asleep than when we are awake.*
>
> *—Erich Fromm*

Chapter 9

HAVE YOU READ THIS BEFORE? REVISITED

I have been born more times than anybody except Krishna.

—Mark Twain

I know I am deathless. No doubt I have died myself ten thousand times before. I
laugh at what you call dissolution, and I know the amplitude of time.

—Walt Whitman

A mind is a terrible thing to waste.

—slogan of the United Negro College Fund

It seems like years since Tom and Judy had last taken a vacation. Ever since purchasing a local business 15 years ago their entire life had revolved around work. As small business owners trying to compete in today's economy, "downtime" has never been an option. Work, work, work. Still, they had promised each other that one day they would take the honeymoon that they could not afford when they first got married.

While stacking products on a particularly busy day at work, Tom suddenly felt a twinge of pain in his arm. He blacked out, and then, next thing he knew, he was lying on a gurney in the emergency room with doctors and nurses hovering over him. Tom had experienced a mild heart attack. In addition to the heart attack, the doctor believed he was suffering from chronic fatigue, and ordered him to take a break from all forms of stress. But how could he

simply walk away from work for any length of time—especially with the fall promotion beginning in a matter of weeks? After informing the physician that was not an option, the doctor replied, “If you want to live, that is your only option.”

Okay, so some of you are probably scratching your heads right now and asking yourselves if you are having a déjà vu moment. Others may be asking themselves how the authors of this book could be so darned clever. Still others might be wondering if they just discovered an editing issue that was somehow overlooked.

Fear not, if you think that you’ve read this before: You have—in our Introduction. But this little bit of cleverness simply serves as a reminder of how quickly we can (and often do) forget many details, yet still retain the shadow of recognition that reminds us that we have done it, seen it, heard it, read it, or experienced it all before. The mind loves to play tricks on us any chance it gets.

Yet as the previous chapters have indicated, we still have so little true understanding of our minds, our brains, and our consciousness. Even with all of the incredible advances in medical technology and knowledge, we are still very much in the dark about what is unquestionably the most important aspect of what defines “us” as human beings. Perhaps the mysteries of the inner universe take far more than technology to master. To comprehend. To know.

From the feeling of having experienced something before:

> *When I was about 10 years old, I would have these déjà vu experiences. But I’m not talking about I would have one and not have one for a few months type of thing. I am talking about strong ones that happened frequently. Almost daily. They use to happen so much I literally thought I was repeating days over again. I remember one particular school day that really had me frightened to the point I started to see a a school therapist because of it. Every morning my teacher would write on the board math problems we had to figure out to get our brains working for the day. Now I was bad at math. I have a learning disability in math so I struggled a lot with it. But on this day, I went to my desk and sat down and stared at the board. I remember saying to myself under my breath why she wrote the same problems as yesterday. So I commenced to write the problem and solved them. When I took my paper to my teacher she stares at me and says, “Wow, Nicolas. You must have been*

studying, you figure these out exactly." I told her it was easy when you put the same problems up two days in a row. She then looked at me strangely and told me this was the first time she has ever put those problems on the board. I'm telling you, Marie, I still remember till this day her doing those problems, and I'm not talking about the second time but the first time before there was a "second time."

—Nicolas J. Janvier

To the possibility of having had a precognitive dream of a catastrophic disaster:

December 17, 2003

I was visiting a seashore in a coastal town. I do not remember what I was doing, but I got this feeling that a huge wave would be coming and would drown thousands for miles inland. My boyfriend, Jeff, was with me and we began to run. We were running much faster than humanly possible. I was barefoot and running over bushes and through fields and woodlands. The landscape kept changing. At one point I was climbing an icy hill in my bare feet, only the cold didn't bother me and I never got tired. I could sense the tsunami coming. Trees and bushes were in the way and my boyfriend and I had to run on a dirt path in order to keep up ahead of the approaching water. We ran through a town and I considered climbing up the stairs to the top of a tall building but I knew the wave would bury all the buildings. Then other people began running too. People of all ages were running ahead of us and behind us. Still I did not feel tired. I instinctively knew the water had long since buried the coastal town where I had begun running from. I knew hundreds had died and I could see the shadow of the giant wave out of the corner of my eye. We kept running inland and had already gone many miles but the water was still coming. Families were running too but were slowed by their children. Jeff grabbed a little boy and continued on with him in his arms. My first thought was that grabbing a child would only slow me down but I knew Jeff was doing the right thing. I ran toward a mother with many children and asked her for her smallest child. She handed me a little girl maybe three or four years old but very small. I put her in my arms and pulled her hood over her head so branches would not scrape her head as I ran thought the bushes. Jeff and I continued running still much faster than possible. I knew that only the children we grabbed would survive. The rest of their families didn't stand a chance. The wave was coming much faster now and was getting close.

The Indian Ocean Tsunami killed nearly 230,000 people in 11 countries exactly one year later on December 26, 2004.

—Christie Fournier

Our minds truly do work in the most mysterious of ways.

By its very nature, science would tend to discount the previous personal experiences, as well as the other personal and subjective experiences that we have presented throughout this book. But can we ignore them? Sweep them under the rug, simply because we have yet to discover the physical mechanisms responsible in accordance with scientific methodology? Due to lack of hard, physical evidence, some individuals would likely encourage such irresponsible behavior. However, to do so would also be discounting the experiences of millions of people throughout history.

Science might tell us that a dream of a tsunami one year before it actually happens on the world stage is nothing more than sheer coincidence—a simple quirk or twist of fate. But to the dreamer, there is no timeline for precognition. Throughout history, even the great prophets and seers claimed to have the ability to see events far into the future. Think of the more well-known mystics: Nostradamus, Malachi, St. John of Revelation, and Edgar Cayce. Yes, their prophecies are open to interpretation and are not always, if ever, completely accurate. But millions of people believe in them. Maybe we should be asking ourselves if there is something else entirely going on here.

Could these dreams, these visions, these prophecies speak of things that might happen—if a particular path is followed? If a particular time line is adhered to? If a particular decision is made or not made? And…could they be the mind's ability to see into other levels of reality, where indeed these events come to pass?

This certainly might sound farfetched—the realm of speculation and conjecture. But is it? Remember. We barely understand consciousness and reality, let alone how many levels it contains, and how far into the past and future it can travel.

The brain is a part of our physical body, a system of a living organism made up of interconnected systems, each with distinct roles and purposes. Yank out the brain and the body dies. But the organism itself may not. Maybe it just changes form into a different kind of energy that perhaps cannot be measured, weighed, or seen. Perhaps taking the form of the mysterious "dark energy," the hypothetical form of energy that permeates all of space, and

which physicists have theorized accounts for 74 percent of the total mass-energy of the universe. This concept may actually have a scientific foundation based upon the law of conservation of energy. This law, grounded in principles of physics, states that the total amount of energy in an isolated system remains constant throughout time. According to the law, energy cannot be created nor destroyed—only changed from one form to another.

It has been suggested that the physical human body contains elements of both isolated and open systems. For instance, the fact that we take in substances from our environment, such as food and air, and return other substances, such as carbon dioxide and waste material, to the environment would neatly fit into the open system category. Our circulatory system is a closed system in which the blood stays in the circulatory system as it circulates, and chemicals are exchanged by diffusion. It has been argued that the brain is a closed system, because the only thing it exchanges with the outside world is "information"—however, even that is not directly exchanged, but rather mediated or "brokered," through the brain and manifested via somatic means. So, upon physical death what happens to that energy? Does it simply fade into obscurity, or does it somehow transform into a different form?

This certainly might explain the ever-increasing reports of all sorts of paranormal and mystical experiences. It might also help to explain the most cutting-edge research that shows that our thoughts and intentions have more power than we ever imagined because those thoughts have an energy all their own, an energy that may survive beyond bodily death. There may be more to the thinker of thoughts that the thoughts thunk by the thinker while the thinker is alive to think. Try to say that five times quickly!

A December 3, 2009 report on *Telegraph.co.uk*. from the Associated Press detailed the research of a group of European scientists who had succeeded in creating a robotic hand that can be controlled entirely by thought. The subject was an amputee who had lost his left hand and forearm. Remarkably, the subject was able to control the movement of his new biomechanical hand simply with his own thoughts. Electrodes implanted in his arm allowed the scientists to measure the complexity of movement the subject was able to attain by thought alone.

Although brain researchers may simply point to the neurological impulses thought creates, which then affect the nerves of the area of the implants causing the subtle movements, it still opens the door to looking at thought in a whole new light. After all, for years scientists have been poo-pooing self-help gurus who claim that if you change your thoughts, you can change your life. Obviously, as evidenced by such books as *The Secret*, there is something to this belief! Apparently, if you change your thoughts, or tweak them accordingly, you can also move a robotic hand and give someone the middle finger!

Once again, as we authors often do, we turn to physicist David Bohm's orders of reality. The brain may be the controller of the domain of the explicate order, the physical and manifest, what we see and do on the "outside." The mind, then, would be the master of the implicate order, the vast unseen where thought, intention, belief, idea, and archetype all converge and combine to create the hidden essence of a thing. And consciousness, then, would be the controlling force of the superimplicate order, the all-knowing overseer that connects the individual self to everything else there is —seen and unseen, past, present, and future. All three of these orders are at play in the world around us, just as they are at play in our own realities. And the death of one order, mainly the explicate, does not in any way indicate the finality of the other two. At least, as of yet, we have no proof that it does.

If we take this one step further, and go with that flow of interconnectivity of Bohm and other quantum physicists speak, we may want to take another look at the anomalies of the mind, and that underlying web that appears to connect particles that come in contact with one another through vast distances of space/time, that collective field of all information, that source of all sources. Déjà vu, lucid dreams, precognition, time slips, mind trips, missing time, memory glitches, alternate personalities, voodoo curses, magic spells, intention—even ghosts, UFOs, cryptids, and PSI abilities—it all may be the domain of the orders we cannot see in a physical sense. Perhaps this field, or grid, as we call it, of connectivity does indeed allow for time travel, whether of the mind or body, as well as experiences of the self in other universes and dimensions. Furthermore, would it not be possible that this may be the means to facilitate the appearance of entities from those other universes and dimensions into ours?

There is a connective mechanism within the levels or planes of this Grid that link one level to the next, and the mind, or consciousness, has the innate ability to utilize these mechanisms in a way that our physical bodies cannot. Although we are limited by our flesh and blood, our mind does not have similar constraints. Our physical body may turn to dust upon death, but not our consciousness, because it is not matter. It is formless. That which is without form follows laws much different than form itself—laws even our brightest and best scientists are only beginning to examine, let alone understand. This is the realm of noetic science, of consciousness research, of thought/intention experimentation. A controlled laboratory setting may not be enough here. The methodology just doesn't fit the method!

No current cutting-edge technology can prove this to be true, but it can't disprove it, either. Skeptics argue that the above-mentioned experiences are subjective, prone to belief, imagination, and personal interpretation. And yet, they may have gotten it exactly right. Our fundamental perception of reality may be vastly different, and more complex than we are aware.

Because what we are talking about is the domain of the unseen, the free-zone of the un-tethered brain, and the favorite tourist spot of consciousness. The final frontier and the greatest unsolved mystery. The hidden universe that no telescope, no matter how expensive or sophisticated, can peer into. The vast and uncharted realm that only reveals its existence to us in those strange haunting experiences we cannot explain.

The human mind.

From *The Matrix* (1999), Neo sees a black cat walk by them, and then a similar black cat walk by them just like the first one.

> **NEO:** *Whoa. Déjà vu.*
> *[Everyone freezes right in their tracks]*
> **TRINITY:** *What did you just say?*
> **NEO:** *Nothing. Just had a little déjà vu.*
> **TRINITY:** *What did you see?*
> **CYPHER:** *What happened?*
> **NEO:** *A black cat went past us, and then another that looked just like it.*

TRINITY: *How much like it? Was it the same cat?*
NEO: *It might have been. I'm not sure.*
MORPHEUS: *Switch! Apoc!*
NEO: *What is it?*
TRINITY: *A déjà vu is usually a glitch in the Matrix. It happens when*
they change something.

Are we experiencing, then, nothing more than glitches in the Matrix, or as we like to call it, the Grid? According to a recent Nielson poll more than 80 percent of American homes have personal computers; let's take the analogy of a computer and examine this a bit further.

Imagine each of us is a brilliantly designed "bio-computer," a Mac (or, for you uber technophiles—a Linux machine) among PCs, composed of standardized hardware and software, but also possessing the ability to change (or upgrade) either according to our needs and demands. Faster processor? No problem! More memory? Coming right up!

As bio-computers, we run similar programs (such as the base operating system, also known as the "master program") to everyone around us; however, we are also free to modify the system and customize it to our needs by altering the look and feel of the desktop, changing the screen saver, installing programs that are interesting or useful to us, and, most importantly, having "network connectivity" where we can connect to vast external networks (such as the internet) for collaboration and exchange of information with our peers.

Our external physical similarities are such that it would be nearly impossible for one to easily determine what is "inside" without actually cracking open the case (or, in our case, the skull!). Basically, like the computer, we all appear the same, with bodies, brains, and parts that look similar, give or take some genetic variation. But as humans, we all rock our humanness.

We have customized our "programs" based upon previous life experiences, beliefs, skills, intention, knowledge, and social/cultural conditioning and knowledge. Thus, our "offline" reality is what we each call our "self " reality.

It is ours and ours alone, and no one, not even the most hardcore scientists can prove or disprove it, because only we as the individual are experiencing it.

Similar to writers, who spend a lot of time at the computer (in our cases Mac laptops!), we work much of the time in this "offline" reality of ours, creating and processing our lives according to the information that enters our brain and is filtered through the lens of individual consciousness. We pick and choose what matters to us—what is important to the day-to-day functioning of our lives. The rest, we ignore (or try to suppress).

But every now and then, when we feel the need to connect to something bigger and more expansive than our mundane lives, we take our computer "online," and we are suddenly exposed to other people, other beliefs, other realities, and other consciousnesses out there in the Matrix, the Grid. And it is in this Grid that we find a connectivity that we don't normally experience when we are isolated "offline." We see the "bigger picture."

Once "online," our bio-computer receives a whole plethora of information it did not have access to while offline, and our CPU (or brain) is now tasked with having to process, comprehend, understand, and integrate it all. Some of the information may certainly appear to be paranormal, unusual, anomalous, or just plain weird! Déjà vu, strange dreams that predict a future event, knowing someone is going to call right before they call, seeing a missing child in a remote location and having the local police verify it, going into an altered state of consciousness, witnessing an apparition, seeing a UFO—these are the glitches in the program that we refuse to accept as normal when we are "offline," but may simply be a part of the whole "online" experience. Just as you can be friended by three thousand people whom you don't know on Facebook, being "online" opens the door to literally thousands of new experiences that were not available until you connected into the World Wide Web or Grid of connectivity.

So then, is the brain considered to be more of an "offline" experiencer? Perhaps human consciousness is what gives us that richer, deeper experience of going "online." Although both have to work together to keep the entire system running smoothly, only one has full access to the "bigger picture" of the Grid.

The next time you have a déjà vu moment, or really any kind of strange and inexplicable moment that does not fit into the ordinary program of your day-today existence, try to stop and feel what is happening. Really make an attempt to experience it rather than simply think about it. This is not a time for the brain to go into overdrive with its rational, analytical ways, but a time for that "other" part of us to experience, rather than analyze. This is a time to set aside the left brain and allow the right a chance to intuit, sense, feel, and be. A time to allow your consciousness—your "online" self—to simply smile and nod in recognition of a glitch in the Master Program—a program that opens up access to the Grid and all its levels of reality, and offers endless and infinite possibilities of mind, memory, and time.

Only when your consciousness is totally focused on the moment you are in can you
receive whatever gift, lesson, or delight that moment has to offer.
—Barbara DeAngelis

There comes a time when the mind takes a higher plane of knowledge but can never
prove how it got there.
—Albert Einstein

I know of but one freedom and that is the freedom of the mind.
—Antoine de Saint-Exupery

RESOURCES

To find out more about the people and research mentioned in this book, here are some Websites that will keep you informed and up to date:

PARAEXPLORERS—AUTHORS' WEBSITE *www.paraexplorers.com*

ARKANSAS PARANORMAL AND ANOMALOUS STUDIES TEAM—ARPAST *www.arpast.org*

MARIE D. JONES *www.mariedjones.com*

JAY ALFRED—DARK PLASMA THEORY *www.dapla.org*

LOYD AUERBACH—DIRECTOR, OFC. OF PARANORMAL INVESTIGATIONS *www.mindreader.com*

RICHARD BRODIE—MIND VIRUSES *www.memecentral.com/rbrodie.htm*

ALAN BROWN—DÉJÀ VU *http://smu.edu/psychology/html/people/brown.htmLl*

AMERICAN PYSCHIATRIC ASSOCIATION *www.psych.org*

ROGER BROWN/DAVID MCNEILL—TOT

www.isites.harvard.edu

ANNE CLEARY—DÉJÀ VU *lamar.colostate.edu/~acleary/AnneCleary.htm*

PETER FENWICK—NDE *www.towardthelight.org/peterfenwick.htmL*

Art Funkhouser—Déjà vu and NDE *http://dreamtalk.hypermart.net/member/files/art_funkhouser.html*

DALE E. GRAFF—PHYSICIST, PSI-SEMINARS INITIATIVE *www.dalegraff.com/*

DR. PAMELA HEATH—PARAPSYCHOLOGY *www.pamelaheath.com/*

INTERNATIONAL CONSCIOUSNESS RESEARCH LABORATORIES *www.icrl.org/*

INSTITUTE OF NOETIC SCIENCES (IONS) *www.noetic.org/*

IRVING JANIS—GROUPTHINK *www.12manage.com/methods_janis_groupthink.htmI l*

STANLEY KRIPPNER, PHD—HUMAN CONSCIOUSNESS *stanleykrippner.weebly.com/*

BRUCE LIPTON, PHD—POWER OF THE MIND *www.brucelipton.com/*

ELIZABETH LOFTUS—MEMORY *faculty.washington.edu/eloftus*

LYNNE MCTAGGART—INTENTION EXPERIMENTS *www.theintentionexperiment.com/*

CHRIS MOULIN—DÉJÀ VU *web.mac.com/chris.moulin/MoulinLab/Chris_Moulin.html*

NATIONAL INSTITUTE OF MENTAL HEALTH—MEMORY DISORDERS *www.nimh.nih.gov/*/

VERNON NEPPE *www.pni.org/clinical/briefneppebio.htm*

ANTHONY PEAKE—DÉJÀ VU AND NDE *www.anthonypeake.com/*

MICHAEL PERSINGER—BRAIN, GOD HELMET *www.parapsych.org/psiexplorer/michaelpersinger.htm*

NICK REDFERN—TULPAS, UFOS, CRYPTOZOOLOGY *www.nickredfern.com/*

RHINE INSTITUTE *www.rhine.org/*

SCIENTIFIC AMERICAN MIND *www.scientificamerican.com/*

MICHAEL SCHMICKER—BOARD OF ADVISORS, RHINE INSTITUTE *www.booksbymichael.com/*

MEGHAN SHANNON—SHAMAN/AYAHUASCA STUDIES *www.infinitelightperu.com*

J. DAVID SMITH—ANIMAL COGNITION *wings.buffalo.edu/psychology/labs/smithlab/*

STANFORD ENCYCLOPEDIA OF PHILOSOPHY *plato.stanford.edu*

RICK STRASSMAN—DMT RESEARCH *www.rickstrassman.com/*

DAROLD TREFFERT—SAVANT SYNDROME *www.daroldtreffert.com/*

UC DAVIS CENTER FOR MIND AND BRAIN *http://mindbrain.ucdavis.edu/*

ROB WAGGONER—LUCID DREAMS *www.lucidadvice.com/*

DR. LEE WARREN—LATENT SAVANT ABILITY *pureinsight.org/node/156*

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ABOUT THE AUTHORS

Marie D. Jones is a best-selling author, screenwriter, researcher, radio show host, and public speaker. She is the author of *2013: End of Days or a New Beginning- Envisioning the World After the Events of 2012*, *PSIence: How New Discoveries in Quantum Physics and New Science May Explain the Existence of Paranormal Phenomena*, and *Looking for God In All the Wrong Places*. She also coauthored *Supervolcano: The Catastrophic Event That Changed the Course of Human History* written with her father, geophysicist Dr. John M. Savino, and *11:11—The Time Prompt Phenomenon: The Meaning Behind Mysterious Signs, Sequences, and Synchronicities*, and *The Resonance Key: Exploring the Links Between Vibration, Consciousness, and the Zero Point Grid*, with Larry Flaxman, her partner in ParaExplorers (*www.paraexplorers.com*).

Marie is a co-host on the popular *Dreamland* radio show interviewing luminaries in the fields of the paranormal, science, unknown anomalies, and alternative history. Marie is also a screenwriter currently developing feature film and television projects, many involving the paranormal, including *19 Hz. The Movie*. Her articles, essays, and stories have appeared in dozens of publications, including five *Chicken Soup for the Soul* books. She is now a staff writer for *TAPS ParaMagazine* , and writes regularly for *New Dawn Magazine* and *Phenomena Magazine* as well. She has written hundreds of book reviews for *CurledUp.com*, *BookIdeas.com*, and *AbsoluteWrite.com*.

Marie also spent fifteen years as a field investigator for the Mutual UFO Network in Los Angeles and San Diego. She currently serves as Director of Special Projects to ARPAST, the Arkansas Paranormal and Anomalous Studies Team. She is also highly active in local and regional disaster preparedness, and is a trained CERT member (Community Emergency Response Team). She is also training with the American Red Cross and is a member of several ham radio disaster NETs, including SATERN, MetroNet, and QuakeNet. Her call sign is KI6YES.

She recently appeared on the History Channel's *Nostradamus Effect* series and *30 Odd Minutes* television with Jeff Belanger, and has been interviewed

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Marie is a highly regarded and popular speaker on science, metaphysics, No-etics, consciousness, and the paranormal, and has appeared at major conferences and events. She has also lectured to local and regional meet-up groups, networking organizations and libraries, bookstores, and author events.

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Larry Flaxman is a best-selling author, paranormal investigator, public speaker, scientific researcher, and screenwriter. He is the author of such popular books as *11:11- The Time Prompt Phenomenon: The Meaning Behind Mysterious Signs, Sequences and Synchronicities* and *The Resonance Key: Exploring the Links Between Vibration, Consciousness and the Zero Point Grid*.

Larry is currently developing projects for feature films and television, including *19 Hz. The Movie*. He is a staff writer for *TAPS Paranormal Magazine*, and writes regularly for *New Dawn Magazine* and *Phenomena Magazine*. Known for his expertise in merging scientific methodology with the paranormal, Larry recently appeared on The Discovery Channel's *Ghost Lab* sharing his theories on resonance and EVP.

Larry is president and senior researcher of ARPAST, the Arkansas Paranormal and Anomalous Studies Team, which he founded in February of 2007. Under his leadership, ARPAST has become one of the nation's largest and most active paranormal research organizations, with more than 150 members worldwide dedicated to conducting research into the paranormal using the most stringent scientific methodology. ARPAST is proud members of the TAPS family (The Atlantic Paranormal Society) from the popular Syfy Channel's television show *Ghost Hunters*. Larry supervises a staff of fully trained researchers and more than $250,000 worth of top-of-the-line equipment. Widely respected for his expertise on the proper use of equipment

and techniques for conducting a solid investigation, Larry also serves as technical advisor to several paranormal research groups throughout the country.

Larry has been featured in dozens of newspapers, magazines, and online publications, and has been interviewed for news and cable television outlets and hundreds of radio programs, including *Coast to Coast With George Noory*, *X-Zone*, *Ghostly Talk*, *Eerie Radio*, *Dreamland*, *Darkness Radio*, *Haunted Voices*, and *Binnall of America*.

He is a seasoned and popular public speaker, and his enthusiasm for education and training in the paranormal field has garnered many requests for major conferences and special events. He is also co-creator (with Marie D. Jones) of *ParaExplorers.com*, devoted to the exploration of ancient and modern unknown mysteries. Larry is also co-creator of the popular new ParaTracker software program for documenting data from paranormal investigation.

He lives in Little Rock, Arkansas.